WBS No: 1DAF01 **Rocky Flats Closure Project** 1DRRSRU105 Activity ID: **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect WBS Filter 1DAF Activity Filter

			u basis of t	estimate	Acti	vity Filter *		Ste	arts In FY *			
WBS No: 1DAF	01 Title: Remote Operating Size Re	e Reduction System										
Activity ID: 1DR	RSRU105 Description: Remote Operating SRS - Pro	S - Proj Mamt 4th Qtr						Cost Risk	4 Schedule R	Risk 5		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
RSRU1001	Project Management for RRSRU	1.00	each	EE	620	620	12.775	73.100	0	85.875	6.094	91.969
SYS	Contingency And Escalation	1.00 ea EE 0				0	0	0	5.009	5.009	0	5.009
	Total for Activity 1DRRSRU105:							73.100	5.009	90.884	6.094	96.977

Line Item RSRU1001 - Project Management for RRSRU

BOE

Estimators Experience - Randy Walker on previous conceptual engineering activities in B776/777

Experience Item Desc - Project Management for the robotic-SRU in B776/777 rm 127

Breakdown of Cost Data: Item - 1

Units - Lot

Unit Cost - 10,800 hours, \$876,132 unburdened

Unit Cost Adjustment factor - None

Revised Unit Cost - 10,800 hours, \$876,132 unburdened

Basis for adjustment - N/A

Resources

es	Cost Element	Skill	Department	Curve	Ouantity Units
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIC	GI KD10H 776 Complex Steelworkers	Linear	310.00 Hours
	Factors 310 hours	1 full time RCT			
Ĺ	750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	D KD10H 776 Complex Steelworkers	Linear	310.00 Hours
	Factors 1 full time D&D workers	310 hours			
L	A52 TENERA	E040 ELECTRICAL ENGINEERS	K399S Building 776 Project	Linear	10.200.00 Dollars
r	Factors 120 hours	85 dollars per hour Tenera		1 electrical end	gineer
Į	A52 TENERA	E070 MECHANICAL ENGINEERS	K399S Building 776 Project	Linear	10.200.00 Dollars
r	Factors 1	1 mechanical engineer	120 hours	85 dollars per h	our Tenera
Į	A52 TENERA	E130 OTHER ENGINEERS	K399S Building 776 Project	Linear	26.350.00 Dollars
r	Factors 310 hours each	85 dollars per hour Tenera		1 Technical Su	ipport Person
L	A52 TENERA	E130 OTHER ENGINEERS	K399S Building 776 Project	Linear	26.350.00 Dollars
	Factors 310 hours		1 Fire Protection Engineer/H\/AC	85 dollars per h	our Topora

Factors 310 Fire Protection Engineer/HVAC dollars per hour Tenera

Line Item SYS - Contingency And Escalation BOE

Resources	Cost Element Skill		Skill	Department	Curve Quant		
	CON CONTINGENCY	0000 N	NONE ZDEPT	No Department	Linear	3,074.68	Dollars
	Factors 3074.68 Dollars						
	ESC ESCALATION	0000 N	NONE ZDEPT	No Department	Linear	1,933.90	Dollars
	Factors 1933.9 Dollars						

Activity ID: 1DRRSRU115 Description: Remote Operating SRS - Facility Mods 4 Schedule Risk Cost Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	0 2	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
RSRU1101	IWCP Development for RR-SRU installation	1.00	each	VQ	0	0	0	134.400	0	134.400	0	134.400
RSRU1102	Floor Modifications	1.00	each	VQ	0	0	0	75.034	0	75.034	0	75.034
RSRU1103	Electrical Supply Modifications	1.00	each	VQ	0	0	0	27.178	0	27.178	0	27.178
RSRU1104	HVAC Modifications	1.00	each	VQ	0	0	0	223.945	0	223.945	0	223.945
RSRU1105	Perform Misc Modifications	1.00	each	VQ	0	0	0	53.550	0	53.550	0	53.550
RSRU1106	Lighting System Modifications	1.00	each	VQ	0	0	0	2.027	0	2.027	0	2.027
RSRU1107	Tank Wall Modifications	1.00	each	VQ	0	0	0	1.700	0	1.700	0	1.700
RSRU1108	Fire System Modifications	1.00	each	VQ	0	0	0	31.659	0	31.659	0	31.659
RSRU1110	Construction Management	1.00	each	VQ	0	0	0	231.852	0	231.852	0	231.852
RSRU1111	General Support/Equipment/Training/Badding	1.00	each	VQ	0	0	0	179.377	0	179.377	0	179.377
RSRU1112	Known Change Orders	1.00	each	VQ	0	0	0	425.000	0	425.000	0	425.000
RSRU1113	Escorts	1.00	each	VQ	0	0	0	115.020	0	115.020	0	115.020
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	81.730	81.730	0	81.730

Page 1 of 27 6/22/00 10:07:40 PM OFFICIAL USE ONLY WBS No: 1DAF01 **Rocky Flats Closure Project** Activity ID: 1DRRSRU115 **Baseline Cost and Basis of Estimate**

Proiect Baseline Devl WBS Filter 1DAF

Starts In FY

Activity Filter

1.500.742 Total for Activity 1DRRSRU115: 81.730 1.582.472 1.582.472

Line Item RSRU1101 - IWCP Development for RR-SRU installation

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688 Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Department Curve Units A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS K399S Building 776 Project Linear 134,400,00 Dollars

IWCP Packages Hours per IWCP Package January 2000 Earned Value Factor Factors 21 80 dollars per hour

Line Item RSRU1102 - Floor Modifications

Vendor Name - RMRS Engineering BOE

Vendor Ouote - KRCR10-01 with K-H Revisions Ouote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Cost Element Units Resources Department Curve Quantity A5B CONSTRUCTION 0000 NONE K777C Construction Linear 75.034.00 Dollars

Factors 75034 dollars

Line Item RSRU1103 - Electrical Supply Modifications

Vendor Name - RMRS Engineering BOE

Vendor Ouote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Ouote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Units Cost Element Department Curve

A5B CONSTRUCTION 0000 NONE K777C Construction Linear 27.178.00 Dollars

Factors 27178 dollars

Line Item RSRU1104 - HVAC Modifications

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Cost Element Resources Quantity Units Department Curve K777C Construction Linear 223.945.00 Dollars

A5B CONSTRUCTION 0000 NONE

Factors 223945 Dollars Line Item RSRU1105 - Perform Misc Modifications

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Ouote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Skill Department Curve **Ouantity** Units A5B CONSTRUCTION 0000 NONE K777C Construction Linear 53 550 00 Dollars

53550 Dollars Factors

Line Item RSR<u>U1106 - Lighting System Modifications</u>

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

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WBS No: 1DAF01 Baseline Devl Proiect Rocky Flats Closure Project 1DRRSRU115 Activity ID: WBS Filter 1DAF **Baseline Cost and Basis of Estimate** Activity Filter

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Department Units A5B CONSTRUCTION 0000 NONE K777C Construction Linear 2.027.00 Dollars

Factors 2027 dollars

Line Item RSRU1107 - Tank Wall Modifications

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Skill Department Curve Quantity Units 0000 NONE A5B CONSTRUCTION K777C Construction 1.700.00 Dollars Linear

Factors 1700 dollars

Line Item RSRU1108 - Fire System Modifications

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Ouote Received by - Jeff Woltmath x 2688 Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources

Units Cost Element Department Curve Quantity A5B CONSTRUCTION 0000 NONE K777C Construction Linear 31.659.00 Dollars

Factors 31659 dollars

Line Item RSRU1110 - Construction Management

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Ouote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Cost Element Units Resources Department Curve A5B CONSTRUCTION 0000 NONE K777C Construction Linear 231.852.00 Dollars

Factors 231852 dollars

Line Item RSRU1111 - General Support/Equipment/Training/Badging

Vendor Name - RMRS Engineering BOE

Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688

Item being guoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Skill Curve Quantity Units Department A5B CONSTRUCTION 0000 NONE K777C Construction Linear 179.377.00 Dollars

Factors 179377 Dollars

Line Item RSRU1112 - Known Change Orders

Vendor Name - RMRS Engineering BOE

Vendor Ouote - KRCR10-01 with K-H Revisions Ouote Received by - Jeff Woltmath x 2688

Item being quoted - ROSRS Facility Modifications

Other Info - Davis Bacon Quote as modified by K-H Project Manager

Availability - K-H Construction to perform the scope

Resources Cost Element Ouantity Units Department Curve

Starts In FY

WBS No: 1DAF01 Proiect Baseline Devl Rocky Flats Closure Project 1DRRSRU115 1DAF Activity ID: WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY A5B CONSTRUCTION 0000 NONE K777S Construction I 425.000.00 Dollars Linear Factors 425000 Change Orders for flooring Line Item RSRU1113 - Escorts Vendor Name - RMRS Engineering BOE Vendor Quote - KRCR10-01 with K-H Revisions Quote Received by - Jeff Woltmath x 2688 Item being quoted - ROSRS Facility Modifications Other Info - Davis Bacon Quote as modified by K-H Project Manager Availability - K-H Construction to perform the scope Resources Cost Element Skill Department Curve Units A56 WORLD WIDE SERVICES 0000 NONE K399S Building 776 Project Linear 115.020.00 Dollars Factors 6 **Escorts** 30 dollars per hour hours per day 71 days Line Item SYS - Contingency And Escalation BOE Cost Element Skill Units Resources Department Curve CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 50.172.41 Dollars Factors 50172.4 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 31.557.25 Dollars Linear 31557.3 Dollars Description: Remote Operating SRS - BIO Update Activity ID: 1DRRSRU150 4 Schedule Risk Cost Risk Line Item Description Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost **Ouantity** Type Hours/Unit Total Total Cost & Escalation Cost 83.000 RSRU1501 BIO Revisions EE 0 83.000 0 83.000 1.00 each SYS Contingency And Escalation 1.00 ea EE 0 0 4.092 4.092 0 4.092 Total for Activity 1DRRSRU150: 83.000 4.092 87.092 Ω 87.092 Line Item RSRU1501 - BIO Revisions Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777 BOE Experience Item Desc - BIO Page Change for Installation Package and operation of the robotic system as designed and installed. Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$83k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$83k unburdened Basis for adjustment - N/A Resources Cost Element Skill Department Curve **Ouantity** Units E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project A52 TENERA Linear 68,000.00 Dollars **BIO** Engineer 10 Factors 40 hour per week weeks 85 dollars per hour TENERA P160 | TECHNICAL WRITERS AND EDITOR | K399S | Building 776 Project 15,000.00 Dollars A52 Linear Procedure Writer hours per week 75 dollars per hour Factors 1 weeks Line Item SYS - Contingency And Escalation BOE Resources Cost Element Units Denartment Curve CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 2.431.95 Dollars Factors 2431.95 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 1.659.75 Dollars Linear 1659.75 Dollars Activity ID: 1DRRSRU160 Description: Remote Operating SRS - RFETS Procedure Develop Cost Risk 4 Schedule Risk

BOE

Type

EE

Units

Ouantity

1.00 each

Labor

Hours/Unit

378

Labor Hours

Total

378

Labor Cost

Total

7.770

Line Item

RSRU1601

Identify Work Steps

Description

Contingency

& Escalation

Total Prime

Cost

7.770

Burden Cost

3.706

Total Cost

11.477

Materials/ Sub

Cost

Alberton DRKSRVI160	WBS No: Activity ID:	1DAF01 1DRRSRU160			Rockv Fla	ts Closu	re Pro	iect	Proiect		aseline DAF	Devl				
RERUISEZ Mazarda feoralization/HA	Activity ID:	IDRKSKU100			Baseline Cost	t and Basi	of Est	imate			DAF		Sta	uto In EV	*	
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RESILIGIDA Reviews/Review Covarious Proceedure														۷.۰		
RESULIDIS Penages RESULSOD 1.00 and EE 0 0 0 17.000																
Finalize Procedures																
Continuency And Escision																
Total for Activity 10RRSRUTION: Edits 12.704 99.116 6.420 118.238 6.080 124.288																
Content Month Mo	515	Contingency And Escalation					0							0.0		
Resources Resources To STRAIGHT TIME BASE BOB Workers BOB Workers BOB Workers BOB Workers BOB Workers BOB Workers BOB STRAIGHT TIME BASE To STRAIGHT T	Line Item RSR								12.704	99.11	01	6.420	118.239	0.0	J6U	124.298
TSO STRAIGHT TIME BASE TOSO RADIATION CONTROL TECHNOLIC KD10H T76 Complex Steelworkers Linear 126.00 Hours per day	вое	Experience Item Desc - Activity screenseakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 378 hrs, \$8k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 378 hrs, \$8k un	een and work			opmene in		, ,								
Total Content Transport Total Transport Transport Total Transport Transport Total Transport Tran	Resources	Cost Element		Skill				Departmen	nt			Curve	Ou	antity	Units	
Factors 9 hours per day 1 RCT 14 days 1 RCT 15 STRAIGHT TIME BASE T060 DAD HAZ REDUCTECH / RISK RED KD10H 776 Complex Steehworkers Linear 252.00 Hours 25	.100001.003		TOSO RADIA		ROL TECHNOLI	IGI KD10H	776 Co						Va			
TSO STRAIGHT TIME BASE TORO D8D HAZ REDUC TECH / RISK RED KD10H 7/6 Complex Steelworkers Linear 252.00 Hours			1		NOL ILOI INOLI				IIIOIO			Linoui	,	120.00	louio	4
Description			T060 D&D H		TECH / RISK RE	D KD10H			rkers			Linear		252 00 F	loure]
BOE Strimstors Experience = Randy Malker based on similar procedure development in B776/777 Stoperience Experience = Randy Malker based on similar procedure development in B776/777 Stoperience Experience = Randy Malker based on similar procedure development in B776/777 Stoperience Experience = Randy Malker based on similar procedure development in B776/777 Resources Resources Resources Con Finance					TECHT/ NION NE	וטוטון						Lilleai		202.00	iouis	1
Resources Resources Resperience Randy Walker based on similar procedure development in B776/777	I ino Itom DSE		14	uays			3	riours each	per day							
Total Straight Time Base Total Radiation Control Technoligi KD10H 776 Complex Steelworkers Linear 80.00 Hours		Breakdown of Cost Data: Item - 1	nalysıs													
Total Straight time Base Total Radiation Control Technoligi KD10H 776 Complex Steelworkers Linear 80.00 Hours		Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene	ed													
Factors	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene Basis for adjustment - N/A	ed	Skill				Denartmen	ot .			Curve	Ou	antity	Unite	1
Total Content Total Conten	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdens Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdens Basis for adjustment - N/A Cost Element	ed unburdened		ROI TECHNOLI	IGI KD10H	776 Co						Ou			
Factors 8 hours per day each 10 working days 2 D&D Workers A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project Linear 34.000.00 Dollars	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdens Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdens Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE	ed unburdened	TION CONT		IGI KD10H		mplex Steelwo					Ou			
A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project Linear 34.000.00 Dollars Factors 40 hours per week 85 dollars per hour 1 Criticality Safety Engineers 10 weeks each CSOL development Linear 6.800.00 Dollars Factors 85 dollars per hour 1 Nuclear Safety Engineer 2 weeks review nuclear hazard controls 40 hours per week A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT	ed unburdened T050 RADIA 8	TION CONT hours p	er day		10	mplex Steelwo days	rkers			Linear	Ou	80.00 F	lours]
Factors 40 hours per week 85 dollars per hour 1 Criticality Safety Engineers 10 weeks each CSOL development A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project Linear 6.800.00 Dollars Factors 85 dollars per hour 40 hours per week A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 6.800.00 Dollars Factors 1 Industrial Hygenist 8 hours per day 10 days 85 dollars per hour Line Item RSRU1603 - Draft Operations Procedure BOE Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE	ed unburdened T050 RADIA 8 T060 D&D H	TION CONT hours p AZ REDUC	er day TECH / RISK RE		10 776 Co	mplex Steelwo days mplex Steelwo	rkers			Linear	Ou	80.00 F	lours]
A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project Linear 6.800.00 Dollars Factors 85 dollars per hour 40 hours Der Week A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 6.800.00 Dollars Factors 1 Industrial Hygenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Factors 1 Industrial Hygenist 8 hours per day 10 days 85 dollars per hour Linear 6.800.00 Dollars Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost - \$18k unburdened Basis for adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene Revised Unit Cost - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 8 hours per day each	ed unburdened T050 RADIA 8 T060 D&D H	TION CONT hours p AZ REDUC working	er day TECH / RISK RE days	ED KD10H	10 776 Co 2	mplex Steelwo days mplex Steelwo D&D Worke	rkers			Linear Linear		80.00 H	lours]
Factors 85 dollars per hour 40 hours per week A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 6.800.00 Dollars Factors 1 Industrial Hygienist 8 hours per day 10 days 85 dollars per hour Line Item RSRU1603 - Draft Operations Procedure BOE Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Brakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene Revised Unit Cost - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 8 hours per day each A52 TENERA	ed unburdened	TION CONT hours p AZ REDUC working AR (CRITIC	er day TECH / RISK RE days CALITY) ENGINE	ED KD10H	10 776 Co 2	mplex Steelwo days mplex Steelwo D&D Worke a 776 Project	orkers orkers ers		10	Linear Linear	3	80.00 H	lours lours Oollars]
## A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ## Factors 1 Industrial Hygenist 8 hours per day 10 days 85 dollars per hour ### Line Item RSRU1603 - Draft Operations Procedure ### BOE Estimators Experience - Randy Walker based on similar procedure development in B776/777 ### Experience Item Desc - Activity screen and work step development ### Breakdown of Cost Data: Item 1 Units Lot Unit Cost - \$18k unburdened Unit Cost - \$18k unburdened Basis for adjustment - N/A ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear 6.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear G.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS R399S Building 776 Project Linear G.800.00 Dollars ### A52 TENERA P090 INDUSTRIAL HYGIENISTS P090 INDUSTRIAL HYGIENISTS P090 P090	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdend Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdend Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 8 hours per day each A52 TENERA Factors 40 hours per week	ed unburdened T050 RADIA 8 T060 D&D H 10 E080 NUCLE	TION CONT hours p AZ REDUC working AR (CRITIC dollars	er day TECH / RISK RE days CALITY) ENGINE per hour	ED KD10H	10 776 Co 2 Building	mplex Steelwo days mplex Steelwo D&D Worke a 776 Project Criticality Sa	orkers orkers ers		10	Linear Linear weeks	3, each CSOL	80.00 F 160.00 F 4.000.00 C developme	lours lours Dollars	
A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 6.800.00 Dollars Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Line Item RSRU1603 - Draft Operations Procedure BOE Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdend Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdend Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 8 hours per day each A52 TENERA Factors 40 hours per week A52 TENERA	ed unburdened T050 RADIA 8 T060 D&D H 10 E080 NUCLE	TION CONT hours p AZ REDUC working AR (CRITIC dollars	er day TECH / RISK RE days CALITY) ENGINE per hour	ED KD10H	10 776 Co 2 Building 1 Building	mplex Steelwo days mplex Steelwo D&D Worke page 776 Project Criticality Sa	orkers orkers ers afety Engineers	<u> </u>		Linear Linear weeks Linear	3. each CSOL	80.00 F 160.00 F 4.000.00 E developme 6.800.00 E	Hours Hours Hours Hours Hollars Hollars Hollars]
Factors 1 Industrial Hydenist 8 hours per day 10 days 85 dollars per hour Line Item RSRU1603 - Draft Operations Procedure BOE Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A	Resources	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene Revised Unit Cost - Revised Unit Cost Element T50 STRAIGHT TIME BASE Factors 1 RCT T50 STRAIGHT TIME BASE Factors 8 hours per day each A52 TENERA Factors 40 hours per week A52 TENERA Factors 85 dollars per hour	ed unburdened T050 RADIA 8 T060 D&D H 10 E080 NUCLE	TION CONT hours p AZ REDUC working AR (CRITIC dollars	er day TECH / RISK RE days CALITY) ENGINE per hour	ED KD10H	10 776 Co 2 Building 1 Building	mplex Steelwo days mplex Steelwo D&D Worke page 776 Project Criticality Sa	orkers orkers ers afety Engineers			Linear Linear weeks Linear	3. each CSOL	80.00 F 160.00 F 4.000.00 E developme 6.800.00 E	Hours Hours Hours Hours Hollars Hollars Hollars	
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Resources Cost Flement Skill Department Curve Quantity Units		Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdene Revised Unit Cost - None Revised U	ed unburdened	TION CONT hours p AZ REDUC working EAR (CRITIC dollars EAR (CRITIC	er dav TECH / RISK RE davs :ALITY) ENGINE per hour :ALITY) ENGINE	ER K399S	10 776 Co 2 Building 1 Building 1	mplex Steelwo days mplex Steelwo D&D Worke 1776 Project Criticality Sr 1776 Project Nuclear Saf	orkers orkers ers afety Engineers	\$	2	Linear Linear weeks Linear weeks Linear	each CSOL i	80.00 F 160.00 F 4,000.00 C developme 6,800.00 C ar hazard	dours dours dollars ent dollars controls	
	Line Item RSR	Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$53k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$53k unburdened Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 8 hours per day each A52 TENERA Factors 40 hours per week A52 TENERA Factors 85 dollars per hour 40 hours per week A52 TENERA Factors 1 Industrial Hydenist RU1603 - Draft Operations Procedure Estimators Experience - Randy Walker Experience Item Desc - Activity screen Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Revised Unit Cost - \$18k unburdened	T050 RADIA 8 T060 D&D H 10 E080 NUCLE 85 E080 NUCLE P090 INDUS 8 r based on sieen and work	TION CONT hours p AZ REDUC working AR (CRITIC dollars FAR (CRITIC TRIAL HYG hours p	er dav TECH / RISK RE davs CALITY) ENGINE DER hOUT CALITY) ENGINE ENISTS er dav Cedure devel	ER K399S ER K399S	10 776 Co 2 Building 1 Building 1	mplex Steelwo days mplex Steelwo D&D Worke 1776 Proiect Criticality Si 1776 Proiect Nuclear Sal	orkers orkers ers afety Engineers	\$	2	Linear Linear weeks Linear weeks Linear	each CSOL i	80.00 F 160.00 F 4,000.00 C developme 6,800.00 C ar hazard	dours dours dollars ent dollars controls	

WBS No: 1DAF01 Proiect Baseline Devl **Rocky Flats Closure Project** Activity ID: 1DRRSRU160 WBS Filter 1DAF **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY P160 TECHNICAL WRITERS AND EDITOR | K399S | Building 776 Project A52 TENERA 18.135.00 Dollars Linear Factors 65 dollars per hour procedure writer 9 hours per day 31 working days Line Item RSRU1604 - Review/Revise Operation Procedure Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$9k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$9k unburdened Basis for adjustment - N/A Resources A52 TENERA P160 TECHNICAL WRITERS AND EDITOR K399S Building 776 Project 8.775.00 Dollars Linear hours per day 65 dollars per hour 15 Factors working days 1 Procedure Writer Line Item RSRU1605 - Prepare SES/USQD Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$17k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$17k unburdened Basis for adjustment - N/A Skill Units Resources Cost Element Department Curve Quantity E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project A52 TENERA 17.000.00 Dollars Linear Factors weeks dollars per hour 1 Nuclear Engineer Line Item RSRU1606 - Finalize Procedures Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Activity screen and work step development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$8k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$8k unburdened Basis for adjustment - N/A Resources A52 TENERA P160 TECHNICAL WRITERS AND EDITOR K399S Building 776 Project 7.605.00 Dollars Linear 9 Factors Procedure Writer 13 working days hours per day 65 dollars per hour Line Item SYS - Contingency And Escalation BOE Cost Element Resources CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 3.940.89 Dollars Factors 3940.9 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear 2.478.73 Dollars Factors 2478.73 Dollars Activity ID: 1DRRSRU170 Description: Remote Operating SRS - RFETS Training Cost Risk 4 Schedule Risk Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Total Cost Line Item Description **Ouantity** Type Hours/Unit Total Cost & Escalation Total Cost FF RSRU1701 **Develop Certification Requirements** 1.00 each 7.605 7.605 0 7.605 WBS No: 1DAF01 Baseline Devl Proiect **Rocky Flats Closure Project** 1DRRSRU170 Activity ID: WBS Filter 1DAF **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY FF 1.920 18.827 RSRU1702 Training for Remote Robotic SRU 1.00 each 1.920 39.469 39.469 58.295 SYS Contingency And Escalation 1.00 ea EE 0 0 3.589 3.589 0 3.589 Total for Activity 1DRRSRU170: 1.920 39.469 7.605 3.589 50.663 18.827 69.489 Line Item RSRU1701 - Develop Certification Requirements Estimators Experience - Randy Walker based on similar procedure development in B776/777 Experience Item Desc - Develop Certification Requirements for Training operators to run the HS-SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$7k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$7k unburdened Basis for adjustment - N/A Resources A52 TENERA P150 TRAINERS K399S Building 776 Project Linear 7.605.00 Dollars Trainer hours per day 13 working days 65 dollars per hour Factors Line Item RSRU1702 - Training for Remote Robotic SRU Estimators Experience - Randy Walker based on experience from training to procedures in B776/777 BOE Experience Item Desc - Training for SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 1920 hours, \$40k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 1920 hours, \$40k unburdened Basis for adjustment - N/A **Ouantity** Units Resources Cost Element Department Curve T050 RADIATION CONTROL TECHNOLIGI KD10H 776 Complex Steelworkers 750 STRAIGHT TIME BASE Linear 640 00 Hours **RCTs** hours each to train on the operation 8 weeks 750 STRAIGHT TIME BASE T060 D&D HAZ REDUC TECH / RISK RED | KD10H | 776 Complex Steelworkers Linear 1.280.00 Hours 40 hours each to train on operation of Factors Craft Personnel weeks Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve Units CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 2.203.17 Dollars 2203.17 Dollars ZDEPT No Department ESC ESCALATION 0000 NONE Linear 1.385.74 Dollars Factors 1385.74 Dollars

Activity ID: 1DRRSRU180	Description: Remote Operating SRS -Phs IV Startup in B776/777		

Activity ID: 1DR	RRSRU180 Description: Remote Operating SRS -Ph	s IV Startup	in B776/777	7				Cost Risk	4 Schedule R	Risk 5		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
RSRU1801	Readiness Demonstration Preparation	1.00	each	EE	0	0	0	14.000	0	14.000	0	14.000
RSRU1806	Perform Hot Start Management Review	1.00	each	EE	0	0	0	20.000	0	20.000	0	20.000
RSRU1809	Perform Independent Validation Review	1.00	each	EE	0	0	0	20.000	0	20.000	0	20.000
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	8.331	8.331	0	8.331
	To	tal for Activi	tv 1DRRSRI	J180·		0	0	54 000	8 331	62 331	0	62 331

Line Item RSRU1801 - Readiness Demonstration Preparation

BOE

Estimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777 Experience Item Desc - Perform Readiness Demonstration preparation activities for RR-SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$14k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$14k unburdened

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WBS No: 1DAF01 Baseline Devl Proiect **Rocky Flats Closure Project** 1DRRSRU180 1DAF Activity ID: WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY Basis for adjustment - N/A Resources Cost Element Skill Department Curve Units G010 ADMINISTRATIVE ASSISTANTS A5H SUBCONTRACTED SRVS K399S Building 776 Project Linear 14.000.00 Dollars hours to conduct management review 35 40 dollars per hour Admimnistrative Assistant Factors 1 10 Line Item RSRU1806 - Perform Hot Start Management Review Estimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777 BOE Experience Item Desc - Perform Readiness Demonstration for RR-SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$20k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$20k unburdened Basis for adjustment - N/A Units Resources Cost Element Skill Department Curve Quantity A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS K399S Building 776 Project Linear 20.000.00 Dollars Factors 100 dollars per hour subcontracted evaluators hours per week week each Line Item RSRU1809 - Perform Independent Validation Review Estimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777 BOE Experience Item Desc - Perform IVR for RR-SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$20k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$20k unburdened Basis for adjustment - N/A Resources Cost Element Skill Department Curve **Ouantity** Units A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS K399S Building 776 Project 20.000.00 Dollars Linear Factors 1 week each 100 dollars per hour Subcontracted Evaluators 40 hours Line Item SYS - Contingency And Escalation BOE Cost Element Resources Skill Curve **Ouantity** Units CON CONTINGENCY 0000 NONE ZDEPT No Department 5.807.36 Dollars Linear Factors 5807.36 Dollars ESC ESCALATION ZDEPT No Department 2.523.50 Dollars 0000 NONE Linear 2523.5 Dollars Factors Activity ID: 1DRRSRU200 Description: FY01 Remote Operating SRS Maintenance Cost Risk 4 Schedule Risk 5 Total Prime BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Line Item Description Quantity Units Burden Cost Total Cost TypeHours/Unit Total **Total** Cost & Escalation Cost 215.759 RSRU200 FY-01 Remote Robotic SRU Maintenance 1.00 each EE 25.344 25.344 611.217 447.850 1.059.067 1.274.826 Contingency And Escalation EE SYS 1.00 ea 196.674 196.674 196.674 Total for Activity 1DRRSRU200: 25.344 611.217 447.850 196.674 1.255.741 215.759 1.471.500 Line Item RSRU200 - FY-01 Remote Robotic SRU Maintenance ROSRS operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below: BOE 2 RCTs 8 D&D workers 2 Waste Inspectors 1 Foreman Estimators Experience - Maintenance Requirements for such items as the supercompactor and the ASRF.

Experience Item Desc - Maintenance on the RRSRU

Breakdown of Cost Data:

WBS No: 1DAF01 **Rocky Flats Closure Project** 1DRRSRU200 Activity ID: **Baseline Cost and Basis of Estimate**

Baseline Devl Proiect 1DAF WBS Filter Activity Filter

Starts In FY *

Item - 1 Units - lot Unit Cost - \$ 250,000 Unit Cost Adjustment factor - none Revised Unit Cost - \$ 250,000 Basis for adjustment - N/A

Resources

_									
es _	Cost Element			Skill		Department	Curve	Ouantity	Units
	750 STRAIGHT TIME BASE	M010	FOREM	IEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.728.00	Hours
F_{ℓ}	actors 1 Foreman		9	hours		192 davs			
	750 STRAIGHT TIME BASE	T050	RADIAT	TION CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers	Linear	3.456.00	Hours
F_{ℓ}	actors 2 RCTs		9	hours		192 davs			
	750 STRAIGHT TIME BASE	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers	Linear	6.912.00	Hours
F_{ℓ}	actors 4 D&D Skilled Workers		9	hours		192 davs			
	750 STRAIGHT TIME BASE	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers	Linear	6.912.00	Hours
F_{ℓ}	actors 4 D&D Hazardous Reduction		9	hours		192 davs			
	751 OVERTIME BASE & PRE.	M010	FOREM	IEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	576.00	Hours
F_{ℓ}	actors 1 Foreman		3	hours		192 davs			
L	751 OVERTIME BASE & PRE.	T050	RADIAT	TION CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers	Linear	1.152.00	Hours
F_{ℓ}	actors 2 total RCT hours		3	hours		192 davs			
L	751 OVERTIME BASE & PRE.	T060	D&D H	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers	Linear	4.608.00	Hours
F_{ℓ}	actors 8 total D&D workers hours		3	hours		192 davs			
	A5C SUPPLIES	0000	NONE		K399S	Building 776 Project	Linear	197.850.00	Dollars
F_{ℓ}	actors 1319000 Operational cost		0.15	15% supplies					
	A5H SUBCONTRACTED SRVS	0000	NONE		K399S	Building 776 Project	Linear	250.000.00	Dollars
E	OFOOO Maintanana an the DDCD								

Factors 250000 Maintenance on the RRSRU

Line Item SYS - Contingency And Escalation

BOE

Resources

ces		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	137,099.50	Dollars
	Factors	137100 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	59.574.46	Dollars

Factors 59574.5 Dollars

Activity ID: 1DF	RRSRU300 Description: FY02 Remote Operating SR	3RS Maintenance							Cost Risk 4 Schedule Risk 5				
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
RSRU200	FY-02 Remote Robotic SRU Maintenance	1.00	each	EE	25.344	25.344	611.217	450.250	0	1.061.467	213.771	1.275.238	
SYS			ea	EE	0	0	0	0	256.998	256.998	0	256.998	
	To	tal for Activity 1DRRSRU300:				25.344	611.217	450.250	256.998	1.318.465	213.771	1.532.236	

Line Item RSRU200 - FY-02 Remote Robotic SRU Maintenance

BOE

ROSRS operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below:

2 RCTs

8 D&D workers

2 Waste Inspectors

1 Foreman

Estimators Experience - Maintenance Requirements for such items as the supercompactor and the ASRF.

Experience Item Desc - Maintenance on the RRSRU

Breakdown of Cost Data:

Item - 1 Units - lot

Unit Cost - \$ 250,000 Unit Cost Adjustment factor - none

Revised Unit Cost - \$ 250,000 Basis for adjustment - N/A

Skill Resources Units Cost Element Department Curve **Ouantity**

WBS No: 1DAF01 Baseline Devl Proiect **Rocky Flats Closure Project** 1DRRSRU300 1DAF Activity ID: WBS Filter **Baseline Cost and Basis of Estimate**

		Activity Filter	*	Starts In FY *
750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	1.728.00 Hours
Factors 1 Foreman	9 hours	192 davs		
750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIGI	KD10H 776 Complex Steelworkers	Linear	3.456.00 Hours
Factors 2 RCTs	9 hours	192 davs		
750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	6.912.00 Hours
Factors 4 D&D Skilled Workers	9 hours	192 davs		
750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	6.912.00 Hours
Factors 4 D&D Hazardous Reduction	n 9 hours	192 davs		
751 OVERTIME BASE & PRE.	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	576.00 Hours
Factors 1 Foreman	3 hours	192 davs		
751 OVERTIME BASE & PRE.	T050 RADIATION CONTROL TECHNOLIGI	KD10H 776 Complex Steelworkers	Linear	1.152.00 Hours
Factors 2 total RCT hours	3 hours	192 davs		
751 OVERTIME BASE & PRE.	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	4.608.00 Hours
Factors 8 total D&D workers hours	3 hours	192 davs		
A5C SUPPLIES	0000 NONE	K399S Building 776 Project	Linear	200.250.00 Dollars
Factors 1335000 Operational cost	0.15 15% supplies			
A5H SUBCONTRACTED SRVS	0000 NONE	K399S Building 776 Project	Linear	250.000.00 Dollars
Fauture 250000 Maintananas on the DDCD	nt t			

Factors 250000 Maintenance on the RRSRU

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	179.682.50	Dollars
	Factors	179683 Dollars							<u> </u>
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	77.315.91	Dollars

77315.9 Dollars

Activity ID: 1DRF	RSRU400 Description: FY03 Remote Operating SR	S Maintena	nce					Cost Risk	4 Schedule R	Risk 5		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Te

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
RSRU200	FY-03 Remote Robotic SRU Maintenance	1.00	each	EE	25.344	25.344	611.217	457.150	0	1.068.367	185.540	1.253.906
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	251.727	251.727	0	251.727
	To	tal for Activi	ity 1DRRSRI	U400:		25.344	611.217	457.150	251.727	1.320.094	185.540	1.505.634

Line Item RSRU200 - FY-03 Remote Robotic SRU Maintenance

BOE

ROSRS operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below: 2 RCTs

- 8 D&D workers
- 2 Waste Inspectors
- 1 Foreman

Estimators Experience - Maintenance Requirements for such items as the supercompactor and the ASRF.

Experience Item Desc - Maintenance on the RRSRU

Breakdown of Cost Data:

Item - 1

Units - lot

Unit Cost - \$ 250,000

Unit Cost Adjustment factor - none Revised Unit Cost - \$ 250,000

Basis for adjustment - N/A

Resources

es		Cost Element		Skill		Department	Curve	Quantity	Units
	750	STRAIGHT TIME BASE	M010	FOREMEN / TEAM LEADS / GROUP	R100S	RMRS Salaried	Linear	1.728.00	Hours
	Factors	1 Foreman		9 hours		192 davs			
	750	STRAIGHT TIME BASE	T050	RADIATION CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers	Linear	3.456.00	Hours
	Factors	2 RCTs		9 hours		192 davs			
	750	STRAIGHT TIME BASE	T060	D&D HAZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers	Linear	6.912.00	Hours
	Factors	4 D&D Skilled Workers		9 hours		192 davs			

WBS No: Activity ID:	1DAF01 1DRRSRU400				Closure P		WB	S Filter 1	aseline Devl DAF	G.		
	750 STRAIGHT TIME BASE	T060 D&D HA	Z REDUC TECH / RISK	DED	KD10H 776	Compley Stee		ivity Filter *	Linear		arts In FY * 6.912.00 Hours	
	Factors 4 D&D Hazardous Reductio	•	hours	KLD	192		IWOINEIS		Lilledi		0.912.00 1100 3	
	751 OVERTIME BASE & PRE.		EN / TEAM LEADS / GR	OUP					Linear		576.00 Hours	.
	Factors 1 Foreman	3	hours		192	davs						
	751 OVERTIME BASE & PRE.		ON CONTROL TECHNO	OLIGI	KD10H 776		lworkers		Linear		1.152.00 Hours	<u>. </u>
	Factors 2 total RCT hours 751 OVERTIME BASE & PRE.	3 T060 D&D HA	<u>hours</u> Z REDUC TECH / RISK	DED	192 KD10H 776	davs	huorkoro		Linear		4.608.00 Hours	
	Factors 8 total D&D workers hours	3	hours	KED	192	davs	IWOIKEIS		Lilledi		4.000.001H0uis)
	A5C SUPPLIES	0000 NONE	Houro			lina 776 Proied	ct		Linear	20	7.150.00 Dolla	's
	Factors 1381000 Operational cost	0.15	15% supplies								•	
	A5H SUBCONTRACTED SRVS	0000 NONE			K399S Build	lina 776 Proied	ct		Linear	25	60.000.00 Dolla	'S
	Factors 250000 Maintenance on the RRSF	RU										
	S - Contingency And Escalation											
BOE								Т		1		
Resources			Skill			Departi	ment		Curve		uantity Un	
	CON CONTINGENCY	0000 NONE			ZDEPT No D	epartment			Linear	13	9.665.70 Dolla	'S
	Factors 139666 Dollars ESC ESCALATION	0000 NONE			ZDEPT No D	lonartmont			Linear	11	2.061.70 Dolla	·c
	Factors 112062 Dollars	I 0000 INCINE			ZDEFT INOL	epartment		L	Lilleai		2.001.70ID0IIa	5
WBS No: 1		nt Dismantlement (Chamber									
Activity ID:	1DSBIRD105 Description: B776/77	7 Hard Side SRU (I	TC) Project Mamt					Cost Risk	4 Schedule Ri.	<i>sk</i> 5		
Line Item	n Description		Quantity Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
BIRD1001	Proiect Management for HSSRU		1.00 each	EE	0	0	0	107.936	0	107.936	0	107.936
		Tot	al for Activity 1DSBIRD1	05:	Į.	0	0	107.93	6 0	107.936	0	107.936
	RD1001 - Project Management for HSSRU Estimators Experience - Randy Walke					:- D776/77	7					
BOE	Experience Item Desc - Project Mana					IU B//6///	/					
	Breakdown of Cost Data:	_										
	Item - 1 Units - Lot											
	Unit Cost - \$145,480											
	Unit Cost Adjustment factor - None	:										
	Revised Unit Cost - \$145,480 Basis for adjustment - N/A											
_	-										.	
Resources		E040 ELECTR	Skill		K200C Duile	Departi			Curve		antity Un	
	A52 TENERA Factors 1 electrical engineer	1 EU4U JELECTR 8	ICAL ENGINEERS hours per day		26	ling 776 Project working			Linear 85 dollar	s per hour Te	7,680.00 Dolla	S
	A52 TENERA		VICAL ENGINEERS			ling 776 Project			Linear		7,680.00 Dolla	'S
	Factors 26 working days	85	dollars per hour Tene	ra	1		cal engineer	•		per day	. 1000100120114	
	A52 TENERA	E130 OTHER	ENGINEERS		K399S Build	lina 776 Proied			Linear		7.600.00 Dolla	s
	Factors 1 Technical Support Person	5	days per week		72	dollars p	er hour Tenera	a	8 AWS	working days	i	
	20 weeks total in FY-00	T T										
	A52 TENERA		ENGINEERS			lina 776 Proied			Linear		4.976.00 Dolla	S
Activity ID:	Factors 1 Fire Protection Engineer/F 1DSBIRD130 Description: B776/77		working days		8	hours pe	er day	Cost Risk	72 dollar 4 <i>Schedule Ri</i> .	s per hour Te sk 5	nera	
		7 Halu Side SKU Fa										
Line Item	n Description		Quantity Units	BOE Type	Labor Hours/Unit	Labor Hours Total	Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
BIRD1301	IWCP Development for HS-SRU installation	n	1.00 each	EE	152	152	3.288			44.518	1.604	46.122
BIRD1302	Floor Modifications		1.00 each	EE	76	76	1.577			18.677	770	19.447
BIRD1303	Electrical Supply Modifications		1.00 each	EE	304	304	6.442			15.942	3.144	19.085
BIRD1304 BIRD1305	HVAC Modifications Perform Misc Modifications		1.00 each 1.00 each	EE FF	152 304	152 304	3.154 6.308	24.700 39.900		27.854 46.208	1.539 3.078	29.393 49.286
פטפו מאומי	IF CHOITH WISC WOULINGATIONS		I.UUIEdUII		11 of 27	304	0.308					USE ONLY
									6/22/00 10:07:4			

Page 11 of 27 6/22/00 10:07:46 PM OFFICIAL USE ONLY WBS No: 1DAF02 Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1DSBIRD130 WBS Filter 1DAF

Total for Activity 1DSBIRD130:

Baseline Cost and Basis of Estimate Activity Filter

988

20.769

132.430

Line Item BIRD1301 - IWCP Development for HS-SRU installation

BOE

Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777 Experience Item Desc - IWCP Development Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 160 hours, \$47k unburdened Unit Cost Adjustment factor - none

Revised Unit Cost - 160 hours, \$47k unburdened Basis for adjustment -N/A

Resources

s	Cost Element		_	Skill			Department		Curve	Quantity	Units
750	STRAIGHT TIME BASE	C020	ELECTR	RICIANS	C211S	Electrica	al Maintenance		Linear	76.00	Hours
Factors	2 Craft support		40	hours each		0.95	January 2000 Earned Value Factor				
750	STRAIGHT TIME BASE	C020	ELECTR	RICIANS	C211S	Electrica	al Maintenance		Linear	76.00	Hours
Factors	2 Electricians		40	hours each		0.95	January 2000 Earned Value Factor				
A52	TENERA	E080	NUCLEA	AR (CRITICALITY) ENGINEER	K399S	Buildina	776 Proiect		Linear	16.150.00	Dollars
Factors	200 hours 80 nuc safety and 12	0 hrs cri	85	dollars per hour Tenera				0.95	January 200	0 Earned Value	Factor
A52	TENERA	P070	COST E	STIMATORS PLANNERS AN	K399S	Buildina	776 Proiect		Linear	14.820.00	Dollars
Factors	1 IWCP Planner		40	hours per week		6	weeks	65	dollars per h	our Tenera	
			0.95	January 2000 Earned Value	Factor						
A52	TENERA	P090	INDUST	RIAL HYGIENISTS	K399S	Buildina	776 Proiect		Linear	6.460.00	Dollars
Factors	80 hours					85	dollars per hour	0.95	January 200	0 Earned Value	Factor
A5H	SUBCONTRACTED SRVS	T060	D&D HA	Z REDUC TECH / RISK RED	KD10H	776 Cor	nplex Steelworkers		Linear	3.800.00	Dollars
Factors	40 hours each		2	D&D Craft		50	dollars per hour				

0.95 January 2000 Earned Value Factor

Line Item BIRD1302 - Floor Modifications

BOE

Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777 Experience Item Desc - Implement IWCP Modification Package Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 80 hours, \$20k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 80 hours, \$20k unburdened Basis for adjustment - N/A

Resources

es		Cost Element			Skill			Department		Curve	Ouantity	Units
Į	750	STRAIGHT TIME BASE	T050	RADIATIO	ON CONTROL TECHNOLIGI	KD10H	776 Cor	mplex Steelworkers		Linear	76.00	Hours
	Factors	2 RCTs		40	hours each RCT support		0.95	January 2000 Earned Value Factor				
	A5C	SUPPLIES	0000	NONE		K399S	Building	776 Project		Linear	9,500.00	Dollars
	Factors	1		10000	misc supplies and equipmer	nt for	0.95	January 2000 Earned Value Factor				
	A5H	SUBCONTRACTED SRVS	T060	D&D HAZ	REDUC TECH / RISK RED	KD10H	776 Cor	mplex Steelworkers		Linear	7,600.00	Dollars
	Fastore	1		40	hours oach		1	D&D Craft	50	dollars per hou	r	

0.95 January 2000 Earned Value Factor

Line Item BIRD1303 - Electrical Supply Modifications

BOE

Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777 Experience Item Desc - Implement IWCP Modification Package Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$17k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$17k unburdened Basis for adjustment - N/A

Resources Cost Element Skill Department Curve **Ouantity** Units

Starts In FY

10.135

163.334

<u>153.19</u>9

WBS No: Activity ID:	1DAF02 1DSBIRD130			Rockv Flats Baseline Cost ar				Proiect WBS Filter Activity Filte	1DA	eline Devl F		Starts In FY	*
	750 STRAIGHT TIME BASE	C020	ELECTR	ICIANS	C211S	Flectrics	al Maintenance	Activity Fine	'	Linear		152.00 H	lours
	Factors 2 electricians	0020	2	weeks each	OZITO	40	hours per wee	k	(iary 2000	Earned Value F	
	750 STRAIGHT TIME BASE	T050		ON CONTROL TECHNOLIGI	KD10H					Linear	2000	152.00 H	
	Factors 2 RCTs	1 1000	2	weeks each	T TO TOTAL	40	hours each we		(ary 2000	Earned Value F	
	A5C SUPPLIES	0000	NONE	WOONO CACIT	K399S		776 Proiect	OK .	Ì	Linear	2000	9.500.00	
	Factors 1		10000	supplies and equipment		0.95		Earned Value Fa	ctor	=1110001		UIUUUIU	
	D1304 - HVAC Modifications		.0000	cappilot and equipment		0.00	oandan, 2000		0.0.				
	Estimators Experience - Randy Walker	r on ma	intenano	ce IWCP packages in B77	6/777								
	Experience Item Desc - Implement IWG Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 160 hours, \$29k unburde Unit Cost Adjustment factor - None Revised Unit Cost - 160 hours, \$29l Basis for adjustment - N/A	ened		1 Package									
Resources	Cost Element			Skill			Department			Curve		Ouantity	Units
Resources	750 STRAIGHT TIME BASE	T050	RADIATI	ON CONTROL TECHNOLIGI	KD10H	776 Cor		ire		Linear		152.00 H	
	Factors 2 weeks each	1000	2	RCTs	I IND IOIT	40	hours per wee		(ary 2000	Earned Value F	
	A5C SUPPLIES	0000	NONE	1.010	K399S		776 Project	`		Linear	2000	9.500.00	
	Factors 1	, 0000	10000	dollars supplies and equipm		0.95		Earned Value Fa	ctor	Linoui		0.000.001	ZOIIGIO
	A5H SUBCONTRACTED SRVS	T060		Z REDUC TECH / RISK RED						Linear		15.200.00	Oollars
	Factors 1	-	4	D&D Craft Support		2	weeks each		4		s per wee	-	
	50 dollars per hour		0.95	January 2000 Earned Value	Factor								
Line Item BIRI	D1305 - Perform Misc Modifications												
	Units - Lot Unit Cost - 320 hours, \$49k unburde Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$49l Basis for adjustment - N/A		dened										
December	Cost Element			Skill			Department			Curve		Quantity	Units
Resources	750 STRAIGHT TIME BASE	T050	DADIATI	ON CONTROL TECHNOLIGI	KD10H	776 Cor		ro		Linear		304.00 H	
		1030	2	RCTs	חטוטח	4	weeks each	:15			Jany 2000	Earned Value F	
	Factors 40 hours per week A5C SUPPLIES	0000	NONE	KCIS	K3006		776 Project			Linear	Jaiy 2000	9,500.00	
	Factors 1	0000	10000	supplies and equipment	NJSSJ	0.95		Earned Value Fa	ctor	Lilleai		9,300.00[L	Dullais
	A5H SUBCONTRACTED SRVS	T060		Z REDUC TECH / RISK RED	KD10H				ClOi	Linear		30,400.00	Oollare
	Factors 1	1000	40	hours each per week	KDIUII	50	dollars per hou) Workers		Dollars
	4 weeks		0.95	January 2000 Earned Value	Factor	30	dollars per floc	II.	-	Dal	VVOIREIS	•	
Activity ID: 1		' Hard Si			i actor			Cost Ris	sk 4	Schedule R	isk	5	
Line Item	Description			Quantity Units BOE Type	Labor Hours/U			or Cost Materia Cotal Co		Contingency & Escalation	Total Pr		ost Total Cost
BIRD1401	Procure Hard side-SRU			1.00 each EE		0	0	0 85	50.000	0	850	0.000	0 850.00
			Tota	al for Activity 1DSBIRD140:			0	0 85	50.000	0	850	0.000	0 850.00
Line Item BIRL	D1401 - Procure Hard side-SRU												
502	Estimators Experience - Randy Walker Experience Item Desc - Procure Phase Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$250k Unit Cost Adjustment factor None Revised Unit Cost - \$250k				procure	ment in	n B771/774						

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WRS No 1DAE02 Project Baseline Devl

WBS No: Activity ID:	1DAF02 1DSBIRD140			Rockv F	Flats	Closure	Proiect			aseline Devl DAF			
Activity ID:				Baseline C	Cost ar	nd Basis o	Estimate		tivity Filter *	JAF	Si	arts In FY *	
	Basis for adjustment - N/A												
Resources	Cost Element		Skill					ırtment		Curve	0	uantity Un	uits
	A5B CONSTRUCTION	0000 NONE					uildina 776 Pro			Max Backloa	ad 8	50.000.00 Dolla	ars
Activity ID:	Factors 1 lot includes air handlers, ar 1DSBIRD145 Description: B776/777			de Size Red odate	uction U	Init 8	50000 Estima	ated from prelim	inary B771/774 Cost Risk	4 Schedule R	isk 5		
Line Item	Description		Quantity	Units	BOE	Labor	Labor Hour		Materials/ Sub		Total Prime	Burden Cost	Total Cost
BIRD1451	BIO Revisions		1.00	each	Type EE	Hours/Uni		0 Total	Cost 13.800	& Escalation	<u>Cost</u> 13.800	0	13.800
DIRD 1431	IDIO REVISIONS	Tot		ity 1DSBIRD		1		0 0			13.800		
Line Item BIR	D1451 - BIO Revisions	100	ai 101 7 totiv	NY IDODINA	7110.			<u> </u>	10.000		10.000		10.000
BOE	Estimators Experience - Randy Walker												
	Experience Item Desc - BIO Page Char	nge for Instal	lation a	nd operat	ion Pa	ckage							
	Breakdown of Cost Data: Item - 1												
	Units - Lot												
	Unit Cost - \$23k unburdened												
	Unit Cost Adjustment factor - none	_											
	Revised Unit Cost - \$23k unburdened Basis for adjustment - N/A	i											
5	-		CI III										
Resources	Cost Element A52 TENERA	E080 NUCLEA	Skill D (CDITIC	'ALITY) ENG	INIEED	K3005 B		irtment ioct		<i>Curve</i> Linear		uantity Un 10.200.00 Dolla	uits
	Factors 1 BIO Engineer	85		per hour	ZIINLLIX	NOSSO D	ulidilid 770 FTC	ieci	ı.		s each	10.200.00ID0IIa	115
	0.6 January 2000 Earned Value		dollaro	oor riour						200 110011	o odon		
	A52 TENERA	P160 TECHNIC	CAL WRIT	ERS AND E	DITOR	K399S B	uildina 776 Pro	iect		Linear		3.600.00 Dolla	ars
	Factors 1 Procedure Writer	75		per hour						80 hour	S		
	0.6 January 2000 Earned Value	e Factor											
Activity ID:	1DSBIRD150 <i>Description:</i> B776/777	Hard Side SRU P	ocedure D	evelopment					Cost Risk	4 Schedule R	isk 5		
Line Item	Description		Quantity	Units	BOE Type	Labor Hours/Uni	Labor Hour Total	s Labor Cost Total	Materials/ Sub Cost	Contingency & Escalation	Total Prime Cost	Burden Cost	Total Cost
BIRD1501	Identify Work Steps		1.00	each	EE	18	1			& Escatation 0	3.885	1.896	5.781
BIRD1502	Hazards Identification/JHA		1.00	each	EE	12	0 12	0 2.467	15.300	0	17.767	1.204	18.971
BIRD1503	Draft Operations Procedure		1.00	each	EE		0	0 0	18.135	0	18.135	0	18.135
BIRD1505	Revise Operation Procedure		1.00	each	EE			0 0			4.388		
BIRD1506	Prepare SES/USQD		II.	each	EE			0 0			1.700		
BIRD1508	Finalize Procedures			each	EE			0 0			3.803		
Line Item BIR	D1501 - Identify Work Steps	lot	al for Activ	ity 1DSBIRD	0150:		30	9 6.352	43.325	0	49.677	3.100	52.777
BOE	Estimators Experience - Randy Walker				velopm	ent in B7	76/777						
502	Experience Item Desc - Activity scre	een and work s	tep deve	lopment									
	Breakdown of Cost Data: Item - 1												
	Units - Lot												
	Unit Cost - 378 hrs, \$8k unburdened	ì											
	Unit Cost Adjustment factor - None	.1											
	Revised Unit Cost - 378 hrs, \$8k un Basis for adjustment - N/A	iburaenea											
D			Skill				D			C		TT.	
Resources	750 STRAIGHT TIME BASE	T050 RADIATI		DOI TECHN	JOLIGI	KD10H 7	76 Complex St	entment		<u>Curve</u> Linear		63.00 Hour	
	Factors 9 hours per day	1 1030 IRADIA II	RCT	NOL IEUM	VOLIGI	זו חטוטא ו 1		201MOIVG12			ary 2000 Fari	ned Value Facto	
	750 STRAIGHT TIME BASE	T060 D&D HA		TECH / RISk	< RFD		6 Complex St	eelworkers		Linear	aiv 2000 Lan	126.00 Hour	
	Factors 2 D&D Workers	9		ach per day		1					ary 2000 Earı	ned Value Facto	
Line Item DID													
Line item bik	D1502 - Hazards Identification/JHA												
BOE	D1502 - Hazards Identification/JHA Estimators Experience - Randy Walker Experience Item Desc - Job Hazard Ar		ilar pro	cedure de	velopm	ent in B7	76/777						

Page 14 of 27 6/22/00 10:07:48 PM OFFICIAL USE ONLY **Rocky Flats Closure Project**

WBS No:

1DAF02

Unit Cost Adjustment factor - None Revised Unit Cost - \$3k unburdened Proiect Baseline Devl 1DAF

Activity ID: 1DSBIRD150 WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 240 hrs, \$36k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - 240 hrs, \$36k unburdened Basis for adjustment - N/A Units Resources Cost Element Skill Department Curve 750 STRAIGHT TIME BASE T050 RADIATION CONTROL TECHNOLIGI KD10H 776 Complex Steelworkers Linear 40.00 Hours January 2000 Earned Value Factor RCT hours per day 0.5 750 STRAIGHT TIME BASE D&D HAZ REDUC TECH / RISK RED KD10H 776 Complex Steelworkers 80.00 Hours 2 D&D Workers hours per day each 10 working days 0.5 January 2000 Earned Value Factor Factors A52 TENERA NUCLEAR (CRITICALITY) ENGINEER 8.500.00 Dollars E080 K399S Building 776 Project Linear weeks each CSOL development Factors 1 hours per week 85 dollars per hour January 2000 Earned Value Factor Criticality Safety Engineers 0.5 A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project 3.400.00 Dollars Linear Factors 40 hours per week 85 dollars per hour Nuclear Safety Engineer 1 weeks review nuclear hazard controls 0.5 January 2000 Earned Value Factor A52 TENERA P090 INDUSTRIAL HYGIENISTS K399S Building 776 Project Linear 3.400.00 Dollars Factors 1 Industrial Hygenist days 1 hours per day 10 85 dollars per hour 0.5 January 2000 Earned Value Factor Line Item BIRD1503 - Draft Operations Procedure Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Drafting operation procedures Breakdown of Cost Data: Ttem - 1 Units - Lot Unit Cost - \$18k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$18k unburdened Basis for adjustment - N/A Resources **Ouantity** Units Cost Element Department Curve A52 TENERA P160 TECHNICAL WRITERS AND EDITOR | K399S | Building 776 Project 18.135.00 Dollars Linear Factors 1 hours per day working days 65 dollars per hour procedure writer Line Item BIRD1505 - Revise Operation Procedure Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - First incorporation of comments into draft procedures Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$9k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$9k unburdened Basis for adjustment - N/A Units Resources Cost Element Department Curve **Ouantity** A52 TENERA P160 TECHNICAL WRITERS AND EDITOR | K399S | Building 776 Project Linear 4.387.50 Dollars Factors Procedure Writer hours per day working days 65 dollars per hour January 2000 Earned Value Factor 0.5 Line Item BIRD1506 - Prepare SES/USQD Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Perform USOD screen Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$3k unburdened

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WBS No: 1DAF02 Baseline Devl Proiect **Rocky Flats Closure Project** Activity ID: 1DSBIRD150 WBS Filter 1DAF **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY Basis for adjustment - N/A Resources Cost Element Skill Department Curve Units A52 TENERA E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project Linear 1.700.00 Dollars hours 85 dollars per hour Factors 1 Nuclear Engineer 0.5 January 2000 Earned Value Factor Line Item BIRD1508 - Finalize Procedures Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Incorporate comments and finalize procedures Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$8k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$8k unburdened Basis for adjustment - N/A Units Resources Cost Element Skill Department Curve A52 TENERA P160 TECHNICAL WRITERS AND EDITOR K399S Building 776 Project Linear 3.802.50 Dollars Factors Procedure Writer hours per day working days 65 dollars per hour 0.5 January 2000 Earned Value Factor Activity ID: 1DSBIRD160 Description: B776/777 Hard Side SRU (ITC) Training Cost Risk 4 Schedule Risk Line Item Description **Ouantity** Units BOELabor Labor Hours Labor Cost Materials/ Sub Contingency Total Prime Burden Cost Hours/Unit & Escalation Type **Total Total** Cost Cost BIRD1601 Training for Hard Side SRU 1.00 each EE 1.440 1.440 35.582 0 35.582 17.364 BIRD1602 Develop Certification Requirements 1.00 each EE 7.605 0 7.605 Λ Λ n 1.440 35.582 7.605 0 43.187 17.364 Total for Activity 1DSBIRD160:

Line Item BIRD1601 - Training for Hard Side SRU

BOE

Estimators Experience - Randy Walker based on experience from training to procedures in B776/777

Experience Item Desc - Training for HS-SRU Operation

Breakdown of Cost Data:

Item - 1 Units - Lot

Unit Cost - 1,440 hours, \$36k unburdened Unit Cost Adjustment factor - Minimal

Revised Unit Cost - 1,440 hours, \$36k unburdened

Basis for adjustment -

Resources

s		C	Cost Element			Skill		Department	Curve	Ouantity	Units
	750	STRAIGH	T TIME BASE	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers	Linear	960.00	Hours
	Factors	40	hours each to train on opera	ation of	4	Craft Personnel		6 weeks			
	751	OVERTIM	E BASE & PRE.	T050	RADIAT	ION CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers	Linear	480.00	Hours
	Factors	2	RCTs		40	hours each to train on the on	eration	6 weeks			

Line Item BIRD1602 - Develop Certification Requirements

BOE

Estimators Experience - Randy Walker based on similar procedure development in B776/777

Experience Item Desc - Develop Certification Requirements for Training operators to run the HS-SRU

Breakdown of Cost Data:

Breakdown of Cost Dat | Item - 1

Units - Lot Unit Cost - \$8k unburdened

Unit Cost Adjustment factor - None Revised Unit Cost - \$8k unburdened

Basis for adjustment - N/A

Resources			Cost Element			Skill			Department		Curve	<i>Ouantity</i>	Units
	A52	TENERA		P150	TRAINER	S	K399S	Buildina	776 Proiect		Linear	7.605.00	Dollars
	Factors	1	Trainer		9	hours per day		13	working days	65	dollars per ho	our	

Activity ID: 1DSBIRD170 Description: B776/777 Hard Side SRU IVR Cost Risk 4 Schedule Risk Materials/ Sub Line Item Description **Ouantity** Units BOELabor Labor Hours Labor Cost Contingency Total Prime Burden Cost

Total Cost

Total Cost

52.947

7.605

60.552

Activity ID: 1DSBIRD170 Baseline Cost and Basis of Estimate WBS Filter 1DAF Activity Filter Activity Filter Starts In FY Starts In FY Activity Filter Starts In FY Activity Filter Starts In FY Starts In F	WBS No:	1DAF02				Rock	v Flats	Closure P	roiect	Pro	piect Ba	aseline Devl				
Section Process Proc	Activity ID:	1DSBIRD170										DAF				
Readiness Demonstration Proposation	1				l	L						& Facalation		Starts In FY	*	1
BIRD17712	BIRD1701	Readiness Demonstration Preparation			1.00) each								1	0	7.000
BIRDITYON Perform independent Validation Review																20.000
Sys							EE	0		0 0					0	20.000
BOE Botanian Brother	SYS	Contingency And Escalation			1.00) ea	EE	0		0 0	C	2.408	2.40	3	0	2.408
Resource Resource Continuous Report income - Ready Walker hased on similar Readiness demonstrations in B776/777 Resource Continuous Readiness Demonstration preparation activities for HS-SRU Units - STR unburdened Device - STR unburdened Review Resource Continuous Review Readiness Demonstration Review Resource Continuous Review Readiness Demonstration Resource Continuous Review Readiness Demonstration Resource Resource Assist SUBCONTRACTED SRUS Resource Continuous Review Readiness Demonstration Resource Resource Resource Readiness Demonstration Resource Resource Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resource Resource Resource Readiness Demonstration for HS-SRU Resource Resour				Tot	tal for Activ	ity 1DSB	IRD170:			0 0	47.000	2.408	49.40	3	0	49.408
ASH SUBCONTRACTED SRVS Got DAMINISTRATIVE ASSISTANTS K399S Building 776 Project Linear 7,000.00 Dollars Institute Assistant 5 weeks 3 dollars per hour to conduct management review 35 dollars per hour to standard the project of the page of the pag	BOE	Estimators Experience - Randy Walker Experience Item Desc - Perform Readi Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$7k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$7k unburdened Basis for adjustment - N/A			ation pr				IS-SRU						Unite	
Resources Administrative Assistant S weeks 40 hours to conduct management review 35 dollars per hour	Resources		0040	A DA AIA II		A COLOT /	ANTO	KOOOC D.:								-
BOE Retimetors Experience = Randy Walker based on similar Readiness demonstrations in B776/777 Experience Randy Walker based on similar Readiness demonstrations in B776/777 Experience Randy Walker based on similar Readiness demonstrations in B776/777 Experience Randy Walker based on similar Readiness demonstrations in B776/777 Experience Randy Walker based on similar Readiness demonstrations in B776/777 Resources Curve Quantity Units Linear Lin			G010			A55151 <i>F</i>	ANIS				acmont roviou		oro por bour	7.000.001	Dollars	_
Resources Restinators Experience - Randy Walker based on similar Readiness demonstrations in B776/777	l ine Item RIR			5	weeks			40	nouis	to conduct mana	agement review	7 35 UUII	ars per nour			
A5H SUBCONTRACTED SRVS		Units - Lot Unit Cost - \$20k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$20k unburdened	ı													
A5H SUBCONTRACTED SRVS	Resources	Cost Floment			Skill				Den	artment		Curve		Quantity	Unite	7
Factors 5 Subcontracted evaluators 40 Nours per week 1 Week each	Resources		F130	OTHER		RS		K399S Bui					,			1
100 dollars per hour				-						21001			ek each			-
Setimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777		100 dollars per hour														
Experience I tem Desc - Perform IVR for HS-SRU Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$20k unburdened Unit Cost - \$20k unburdened Basis for adjustment factor - none Revised Unit Cost - \$20k unburdened Basis for adjustment - N/A Resources Cost Element	Line Item BIR															
A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS K399S Building 776 Project Linear 20.000.00 Dollars Factors 1 week each 100 dollars per hour 5 Subcontracted Evaluators 40 hours Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve Quantity Units CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 1.431.47 Dollars Factors 1431.47 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear 976.95 Dollars Factors 976.945 Dollars		Experience Item Desc - Perform IVR f Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$20k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$20k unburdened Basis for adjustment - N/A	for HS-			diness	demonstr	rations in 1								
Factors 1 week each 100 dollars per hour 5 Subcontracted Evaluators 40 hours Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve Quantity Units CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 1.431.47 Dollars Factors 1431.47 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear 976.95 Dollars	Resources			ı	- Ditti										CHILD	_
Contingency And Escalation			E130											20.000.00	Dollars	_
BOE Resources Cost Element Skill Department Curve Quantity Units CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 1.431.47 Dollars Factors 1431.47 Dollars Total Control of the control of	Line Hem CVC			100	dollars	per hour		5	Subco	ontracted Evaluat	tors	40 hou	rs			
Resources Cost Element Skill Department Curve Quantity Units CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 1.431.47 Dollars Factors 1431.47 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear 976.95 Dollars Factors 976.945 Dollars		S - Contingency And Escalation														
CON CONTINGENCY 0000 NONE ZDEPT No Department Linear 1.431.47 Dollars Factors 1431.47 Dollars Dollars ESC ESCALATION Dollars ZDEPT No Department Linear 976.95 Dollars Factors 976.945 Dollars																٦
Factors 1431.47 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department Linear 976.95 Dollars Factors 976.945 Dollars	Resources		0000	NONE	Skill			ZDEDT No.		artment			-			-
ESC ESCALATION 0000 NONE ZDEPT No Department Linear 976.95 Dollars Factors 976.945 Dollars			0000	INCINE				L ZUERI INO	Department			Linear		1.431.4/1	DUIIdIS	_
Factors 976.945 Dollars			0000	NONF				ZDEPT No.	Department			Linear		976 95	Dollars	7
											-	Liiiodi		5. 0.001	_ 0	_
	Activity ID:		Operatio	ns							Cost Risk	4 Schedule	Risk 5			
Line Item Description Quantity Units BOE Labor Labor Hours Labor Cost Materials/Sub Contingency Total Prime Burden Cost Total C	Line Item	Description			Quantity	Units	BOE	Labor	Labor Hour	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden (Cost To	Total Cost

WBS No: 1DAF02 Baseline Devl Proiect **Rocky Flats Closure Project** 1DSBIRD210 1DAF Activity ID: WBS Filter **Baseline Cost and Basis of Estimate**

	I	1	Lype	Hours/Unit	1 otal	10tai Acti	vity Filter "	& Escalation	Cost Sto	erts In FY	
ITC2001	FY01 ITC Operations	1.00 each	НС	25.344	25.344	611.217	275.350	0	886.567	291.550	1.178.117
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	64,160	64,160	0	64,160
	Tot	al for Activity 1DSBIRD	0210:		25.344	611.217	275.350	64.160	950.726	291.550	1.242.277

Line Item ITC2001 - FY01 ITC Operations

BOE

ITC operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below:

- 2 RCTs
- 8 D&D workers
- 2 Waste Inspectors
- 1 Foreman

Resources

_		T			
es	Cost Element	Skill	Department	Curve	Ouantity Units
	750 STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	1,728.00 Hours
1	Factors 1 Foreman	9 hours	192 davs		
	750 STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIGI	KD10H 776 Complex Steelworkers	Linear	3.456.00 Hours
1	Factors 2 RCTs	9 hours	192 davs		
	750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	6.912.00 Hours
1	Factors 4 D&D Skilled Workers	9 hours	192 davs		-
	750 STRAIGHT TIME BASE	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	6.912.00 Hours
1	Factors 4 D&D Hazardous Reduction	9 hours	192 davs		
L	751 OVERTIME BASE & PRE.	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	576.00 Hours
1	Factors 1 Foreman	3 hours	192 davs		
L	751 OVERTIME BASE & PRE.	T050 RADIATION CONTROL TECHNOLIGI	KD10H 776 Complex Steelworkers	Linear	1.152.00 Hours
1	Factors 2 total RCT hours	3 hours	192 davs		
L	751 OVERTIME BASE & PRE.	T060 D&D HAZ REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers	Linear	4.608.00 Hours
1	Factors 8 total D&D workers hours	3 hours	192 davs		
L	A5C SUPPLIES	0000 NONE	K399S Building 776 Project	Linear	175.350.00 Dollars
1	Factors 1169000 Operational cost	0.15 15% supplies			
L	A5H SUBCONTRACTED SRVS	0000 NONE	K399S Building 776 Project	Linear	100.000.00 Dollars
,					

Factors 100000 Annual Maintenance

Line Item SYS - Contingency And Escalation

BOE

Resources

ces	S Cost Element Skill		Skill	Department			<i>Ouantity</i>	Units	
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	39.386.50	Dollars
	Factors	39386.5 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	24.773.17	Dollars

24773.2 Dollars Factors

Activity ID: 1DSBIRD220	Description: FY02 ITC Operations			Cost Risk	4 .	Sche

chedule Risk

Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
ITC2002	FY02 ITC Operations	1.00	each	HC	19.008	19.008	458.412	237.100	0	695.512	161.820	857.332
SYS	Contingency And Escalation	1.00 ea EE					0	0	132.265	132.265	0	132.265
	Tot	Total for Activity 1DSBIRD220:						237.100	132.265	827.777	161.820	989.597

Line Item ITC2002 - FY02 ITC Operations

BOE

- ITC operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below:
 - 2 RCTs
 - 8 D&D workers
 - 2 Waste Inspectors
 - 1 Foreman

Resources	;
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es		Cost Element	Skill	Department	Curve	Ouantity Units
	750	STRAIGHT TIME BASE	M010 FOREMEN / TEAM LEADS / GROUP	R100S RMRS Salaried	Linear	1.296.00 Hours
	Factors	1 Foreman	9 hours	192 davs	0.75 efficiency ga	ined in thermal cutting
	750	STRAIGHT TIME BASE	T050 RADIATION CONTROL TECHNOLIGI	KD10H 776 Complex Steelworkers	Linear	2.592.00 Hours
	Factors	2 RCTs	9 hours	192 davs	0.75 efficiency ga	ined in thermal cutting

WBS No: 1DAF02 Baseline Devl Proiect Rocky Flats Closure Project 1DSBIRD220 1DAF Activity ID: WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY T060 D&D HAZ REDUC TECH / RISK RED | KD10H | 776 Complex Steelworkers 750 STRAIGHT TIME BASE 5.184.00 Hours Linear D&D Skilled Workers hours 0.75 efficiency gained in thermal cutting 750 STRAIGHT TIME BASE T060 D&D HAZ REDUC TECH / RISK RED KD10H 776 Complex Steelworkers 5.184.00 Hours Linear D&D Hazardous Reduction efficiency gained in thermal cutting hours 192 davs 751 OVERTIME BASE & PRE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried Linear 432.00 Hours Factors 1 efficiency gained in thermal cutting Foreman hours 192 days 0.75 751 OVERTIME BASE & PRE RADIATION CONTROL TECHNOLIGI KD10H 776 Complex Steelworkers Linear 864.00 Hours Factors 2 total RCT hours hours 192 davs 0.75 efficiency gained in thermal cutting 751 OVERTIME BASE & PRE. D&D HAZ REDUC TECH / RISK RED T060 KD10H 776 Complex Steelworkers 3.456.00 Hours Linear 8 total D&D workers hours hours 192 davs 0.75 efficiency gained in thermal cutting Factors A5C SUPPLIES K399S Building 776 Project 137.100.00 Dollars 0000 NONE Linear Factors 914000 Operational cost 0.15 15% supplies A5H SUBCONTRACTED SRVS 100.000.00 Dollars 0000 NONE K399S Building 776 Project Linear Factors 100000 Annual Maintenance Line Item SYS - Contingency And Escalation BOE Cost Flement Skill Units Resources Department Curve Quantity CON CONTINGENCY ZDEPT No Department 0000 NONE 92,200,62 Dollars Linear Factors 92200.6 Dollars ESC ESCALATION 0000 NONE ZDEPT No Department 40.064.36 Dollars Linear 40064.4 Dollars Factors Activity ID: 1DSBIRD230 Description: FY03 ITC Operations Cost Risk 4 Schedule Risk Description BOELabor Labor Hours Labor Cost Materials/ Sub Total Prime Total Cost Line Item **Ouantity** Units Contingency Rurden Cost Type Hours/Unit Total **Total** Cost & Escalation Cost ITC2003 FY03 ITC Operations 1.00 each HC 19.008 19.008 458.412 242,200 700.612 158 611 859.223 0 SYS Contingency And Escalation 1.00 ea FF 0 245.668 245.668 0 245.668 0 Total for Activity 1DSBIRD230: 19.008 458.412 242,200 245.668 946.280 158.611 1.104.891 Line Item ITC2003 - FY03 ITC Operations ITC operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below: BOE 8 D&D workers 2 Waste Inspectors 1 Foreman Resources Ouantity Units Cost Element Department Curve 750 STRAIGHT TIME BASE FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried Linear 1.296.00 Hours Factors 1 Foreman hours efficiency gained through thermal RADIATION CONTROL TECHNOLIGI | KD10H | 776 Complex Steelworkers 2 592 00 Hours 750 STRAIGHT TIME BASE Linear Factors 2 RCTs hours 192 days efficiency gained through thermal 750 STRAIGHT TIME BASE T060 D&D HAZ REDUC TECH / RISK RED | KD10H | 776 Complex Steelworkers Linear 5.184.00 Hours D&D Skilled Workers efficiency gained through thermal Factors 4 192 days 0.75 hours 750 STRAIGHT TIME BASE D&D HAZ REDUC TECH / RISK RED KD10H 776 Complex Steelworkers Linear 5.184.00 Hours efficiency gained through thermal 4 D&D Hazardous Reduction 9 hours 192 days 0.75 Factors 751 OVERTIME BASE & PRE M010 FOREMEN / TEAM LEADS / GROUP R100S RMRS Salaried 432.00 Hours Linear efficiency gained through thermal Factors 1 Foreman hours 192 davs 0.75 751 OVERTIME BASE & PRE RADIATION CONTROL TECHNOLIGI KD10H 776 Complex Steelworkers 864.00 Hours Linear 2 total RCT hours hours 192 days 0.75 efficiency gained through thermal Factors D&D HAZ REDUC TECH / RISK RED 751 OVERTIME BASE & PRE KD10H 776 Complex Steelworkers Linear 3.456.00 Hours total D&D workers hours efficiency gained through thermal Factors 8 hours 192 days A5C SUPPLIES 0000 NONE K399S Building 776 Project 142.200.00 Dollars Linear

K399S Building 776 Project

948000 Operational cost

100000 Annual Maintenance

A5H SUBCONTRACTED SRVS

Factors

Factors

0.15

0000 NONE

15% supplies

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Linear

100,000.00 Dollars

WBS No: 1DAF02 Activity ID: 1DSBIRD230

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1DAF Activity Filter *

Starts In FY *

Line Item SYS - Contingency And Escalation

Resources	Cost Element		Skill	Department	Curve	Quantity	Units
	CON CONTINGENCY	NCY 0000 NONE		ZDEPT No Department	Linear	179.778.10 Dolla	
	Factors 179778 Dollars						
	ESC ESCALATION 0000 NONE		NONE	ZDEPT No Department	Linear	65.889.76	Dollars

Factors 65889.8 Dollars

Activity ID: 1DX	XXBIRD4 Description: FY04 ITC Operations							Cost Risk	4 Schedule R	isk 5		
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
ITC2003	FY03 ITC Operations	0.88 6	each	HC	19.008	16.674	402.116	212.456	0	614.572	113.397	727.969
SYS	Contingency And Escalation	1.00 €	ea	EE	0	0	0	0	106.428	106.428	0	106.428
	al for Activity	1DXXXBIF	RD4:		16.674	402.116	212.456	106.428	721.000	113.397	834.397	

Line Item ITC2003 - FY03 ITC Operations

BOE

ITC operations will run 12 hours per day. Normal ITC Operations assumes a 13 person crew as outlined below:

2 RCTs

8 D&D workers

2 Waste Inspectors

1 Foreman

Resource	S
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es	Cost Element			Skill		Department		Curve	Quantity	Units
75	50 STRAIGHT TIME BASE	M010	FOREM	IEN / TEAM LEADS / GROUP	R100S	RMRS Salaried		Linear	1.296.00	Hours
Fact	ors 1 Foreman		9	hours		192 days	0.75	efficiency gai	ned through the	rmal
75	50 STRAIGHT TIME BASE	T050	RADIAT	TON CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers		Linear	2,592.00	Hours
Fact	ors 2 RCTs		9	hours		192 days	0.75	efficiency gai	ned through the	rmal
75	STRAIGHT TIME BASE	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers		Linear	5,184.00	Hours
Fact	ors 4 D&D Skilled Workers		9	hours		192 days	0.75	efficiency gai	ned through the	rmal
75	50 STRAIGHT TIME BASE	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers		Linear	5,184.00	Hours
Fact	ors 4 D&D Hazardous Reduction		9	hours		192 days	0.75	efficiency gai	ned through the	rmal
75	OVERTIME BASE & PRE.	M010	FOREM	IEN / TEAM LEADS / GROUP	R100S	RMRS Salaried		Linear	432.00	Hours
Fact	ors 1 Foreman	ı	3	hours		192 davs	0.75	efficiency gai	ned throuah the	rmal
75	OVERTIME BASE & PRE.	T050	RADIAT	ION CONTROL TECHNOLIGI	KD10H	776 Complex Steelworkers		Linear	864.00	Hours
Fact	ors 2 total RCT hours	ı	3	hours		192 davs	0.75	efficiency gai	ned throuah the	rmal
75	OVERTIME BASE & PRE.	T060	D&D HA	AZ REDUC TECH / RISK RED	KD10H	776 Complex Steelworkers		Linear	3.456.00	Hours
Fact	ors 8 total D&D workers hours		3	hours		_192 davs	0.75	efficiency gai	ned throuah the	rmal
A5	SC SUPPLIES	0000	NONE		K399S	Building 776 Project		Linear	142.200.00	Dollars
Fact	ors 948000 Operational cost		0.15	15% supplies						
A5	SH SUBCONTRACTED SRVS	0000	NONE		K399S	Building 776 Project		Linear	100.000.00	Dollars

Factors 100000 Annual Maintenance

Line Item SYS - Contingency And Escalation

BOE

Resources		Cost Element	Skill		Department		Curve	Ouantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	36.530.75	Dollars
	Factors	36530.8 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	69.896.88	Dollars
	_	·							

Factors 69896.9 Dollars

WBS No: 1DAF0	3 <u>Title:</u> Miscellaneous Technology	Demonstra										
Activity ID: 1DS	Activity ID: 1DSTECH100 Description: B776/777 Technology Demo SRU Project Mamt Cost Risk 4 Schedule Risk 5											
Line Item	Description	Quantity Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost	
			Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost			
SYS	Contingency And Escalation	1.00 ea	EE	0	0	0	0	3.851	3.851	0	3.851	
TECH1001	1.00 each	EE	0	0	0	70.720	0	70.720	0	70.720		
	Total for Activity 1DSTECH100:				0	0	70.720	3.851	74.571	0	74.571	

WBS No: 1DAF03
Activity ID: 1DSTECH100

Rockv Flats Closure Project Baseline Cost and Basis of Estimate

Proiect Baseline Devl WBS Filter 1DAF Activity Filter *

Starts In FY

Line Item SYS - Contingency And Escalation

Resources	ces Cost Element Skill		Department	Curve	Ouantity Units
	CON CONTINGENCY	0000 NONE	ZDEPT No Department	Linear	2.364.29 Dollars
	Factors 2364.29 Dollars				
	ESC ESCALATION	0000 NONE	ZDEPT No Department	Linear	1.487.08 Dollars

Factors 1487.08 Dollars

Line Item TECH1001 - Project Management for HSSRU

BOE

Estimators Experience - Randy Walker on previous conceptual engineering activities in B776/777
Experience Item Desc - Project Management for Technology Demonstrations in B776/777
Breakdown of Cost Data:

Item - 1
Units - Lot
Unit Cost - \$71k
Unit Cost Adjustment factor - None

Revised Unit Cost - \$71k Basis for adjustment - N/A

Reso	urces
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s	C	ost Element			Skill			Department		Curve	Quantity	Units
A52		The Literature	E040	ELECTR	RICAL ENGINEERS	K399S	Building	1776 Proiect		Linear	9.180.00	
Factor	s 1	electrical engineer		85	dollars per hour Tenera		12	working days	9	hours per day	V	
A52	TENERA		E070	МЕСНА	NICAL ENGINEERS	K399S	Building	776 Proiect		Linear	9.180.00	Dollars
Factor	s 1	mechanical engineer		85	dollars per hour Tenera		12	working davs	9	hours per day	V	
A52	TENERA		E130	OTHER	ENGINEERS	K399S	Building	1776 Proiect		Linear	34.000.00	Dollars
Factor	<i>s</i> 1	Technical Support Person		8	AWS working days		5	days per week	85	dollars per ho	our Tenera	
	10	weeks total in FY-00										
A52	TENERA		E130	OTHER	ENGINEERS	K399S	Building	1776 Proiect		Linear	18.360.00	Dollars
Ensta	0	Circ Drotoction Coninger/LIV	///	O.F.	dellare nor hour Tenera		40	una el da mada una	0	h a		

Factors 2 Fire Protection Engineer/HVAC 85 dollars per hour Tenera 12 working days 9 hours per day

Activity ID: 1DSTECH110 Description: B776/777 Facility Mods for Technology Demo

Description: Different admits winds for reclinicated being												
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	6.269	6.269	0	6.269
TECH1101	IWCP Development for Technology Demonstration	1.00	each	EE	160	160	3,390	43,400	0	46,790	1,617	48,408
TECH1102	HVAC Modifications	1.00	each	EE	160	160	3,320	18,000	0	21,320	1,584	22,904
TECH1103	Perform Misc Modifications	1.00	each	EE	320	320	6,640	34,000	0	40,640	3,167	43,807
Total for Activity 1DSTECH110:					640	13,350	95,400	6,269	115,020	6,368	121,388	

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill	Department		Curve	Quantity	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	3.848.61	Dollars
	Factors	3848.61 Dollars	-			•			· ·
Ī		ESCALATION	0000	NONE	ZDEPT	No Department	Linear	2.420.69	Dollars

Factors 2420.69 Dollars

Line Item TECH1101 - IWCP Development for Technology Demonstration

Basis for adjustment -N/A

BOE

Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777
Experience Item Desc - IWCP Development
Breakdown of Cost Data:

Item - 1
Units - Lot
Unit Cost - 160 hours, \$47k unburdened
Unit Cost Adjustment factor - none
Revised Unit Cost - 160 hours, \$47k unburdened

Resources Cost Element Skill Department Curve Quantity Units

tivity ID:	1DAF03 1DSTECH110			Closure Proiect and Basis of Estimate	Proiect WBS Filter Activity Filter	Baseline Devl 1DAF *	Starts In FY *	
	750 STRAIGHT TIME BASE	C020 ELECTR	ICIANS	C211S Electrical Maintenance	110117117 1 11107	Linear	80.00 Hours	
	Factors 2 Electricians	40	hours each					
	750 STRAIGHT TIME BASE			KD10H 776 Complex Steelworkers		Linear	80.00 Hours	
	Factors 2 RCTs	40	hours each					
	A52 TENERA			K399S Building 776 Project		Linear	17.000.00 Dollars	
	Factors 200 hours 80 nuc safety and 1	20 hrs crit 85	dollars per hour Tenera					
	A52 TENERA	P070 COST ES	STIMATORS PLANNERS AN	K399S Building 776 Project		Linear	15.600.00 Dollars	
	Factors 1 IWCP Planner	40	hours per week	6 weeks		65 dolla	ırs per hour Tenera	
	A52 TENERA	P090 INDUSTI	RIAL HYGIENISTS	K399S Building 776 Project		Linear	6.800.00 Dollars	
	Factors 80 hours	85	dollars per hour					
	A5H SUBCONTRACTED SRVS	T060 D&D HA	Z REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers		Linear	4.000.00 Dollars	
	Factors 2 Craft support	40	hours each	50 dollars per hour				
e Item TEC	CH1102 - HVAC Modifications							
	Units - Lot Unit Cost - 160 hours, \$21k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 160 hours, \$21 Basis for adjustment - N/A	9						
Resources	Cost Element		Skill	Department		Curve	Quantity Units	
\c30uice3	750 STRAIGHT TIME BASE	T050 RADIATI		KD10H 776 Complex Steelworkers		Linear	160.00 Hours	
	Factors 2 weeks each	2	RCTs	40 hours per week		Lilleal	Too.oon loars	
	A5C SUPPLIES	0000 NONE	IC13	K399S Building 776 Project		Linear	2.000.00 Dollars	
				1 10000 Ibaliania 770 i Toleca		Lilicai	2.000.0010011013	
	Factors 2000 dollars supplies and equip	ment						
	Factors 2000 dollars supplies and equip		7 REDUC TECH / RISK RED	KD10H 776 Complex Steelworkers		Linear	16 000 00 Dollars	
	A5H SUBCONTRACTED SRVS	T060 D&D HA	Z REDUC TECH / RISK RED weeks each			Linear 50 dolla	16.000.00 Dollars	
	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications	T060 D&D HAX 2	weeks each	40 hours per week			16.000.00 Dollars	
	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support	T060 D&D HAX 2 er on maintenant NCP Modification	weeks each	40 hours per week				
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A	T060 D&D HAX 2 er on maintenant NCP Modification	weeks each	40 hours per week				
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A	T060 D&D HAX 2 er on maintenance NCP Modification dened et k unburdened	weeks each ce IWCP packages in B77 n Package Skill	40 hours per week		50 dolla	ars per hour	
вое	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element	T060 D&D HAX 2 er on maintenance NCP Modification dened et k unburdened	weeks each ce IWCP packages in B77 n Package Skill	40 hours per week 6/777 Department		50 dolla	Ouantity Units	
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE	T060 D&D HAX 2 er on maintenance NCP Modification dened et lk unburdened T050 RADIATI	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI	40 hours per week 6/777 Department KD10H 776 Complex Steelworkers Complex Steelw		50 dolla	Ouantity Units	
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs	T060 D&D HA 2 er on maintenance NCP Modification dened et lk unburdened T050 RADIATI	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each		50 dolla Curve Linear	Ouantity Units 320.00 Hours	
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES	T060 D&D HAX 2 er on maintenant NCP Modification dened at unburdened T050 RADIATI 40 0000 NONE 2000	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each		50 dolla Curve Linear	Ouantity Units 320.00 Hours	
BOE	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1	T060 D&D HAX 2 er on maintenant NCP Modification dened at unburdened T050 RADIATI 40 0000 NONE 2000	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each K399S Building 776 Project	eek	50 dolla Curve Linear Linear	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000 Dollars	
вое	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1 A5H SUBCONTRACTED SRVS	T060 D&D HAX 2 er on maintenant NCP Modification dened et k unburdened T050 RADIATI 40 0000 NONE 2000 T060 D&D HAX	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment Z REDUC TECH / RISK RED	### Add ### Hours per week 6/777	eek	50 dolla Curve Linear Linear	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000 Dollars	
BOE Resources	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1 A5H SUBCONTRACTED SRVS Factors 1 Online Supplies	T060 D&D HAX 2 er on maintenant NCP Modification dened et.k unburdened T050 RADIATI 40 0000 NONE 2000 T060 D&D HAX 4	weeks each ce IWCP packages in B77 n Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment Z REDUC TECH / RISK RED	### Add ### Hours per week 6/777	eek Cost Risk	50 dolla Curve Linear Linear	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000.00 Dollars ks	
BOE Resources	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1 A5H SUBCONTRACTED SRVS Factors 1 50 dollars per hour IDSTECH120 Description: B776/77	T060 D&D HAX 2 er on maintenant NCP Modification dened et.k unburdened T050 RADIATI 40 0000 NONE 2000 T060 D&D HAX 4	weeks each De IWCP packages in B77 Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment Z REDUC TECH / RISK RED D&D Workers Instration Procurement Quantity Units BOE	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each K399S Building 776 Project KD10H 776 Complex Steelworkers 40 hours each per weeks Labor Labor Hours Labor C	Cost Risk Cost Materials/S	Curve Linear Linear 4 week 4 Schedule Ri Sub Contingency	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000.00 Dollars ks 5	
Resources tivity ID: Line Item	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1 A5H SUBCONTRACTED SRVS Factors 1 50 dollars per hour Description	T060 D&D HAX 2 er on maintenant NCP Modification dened et.k unburdened T050 RADIATI 40 0000 NONE 2000 T060 D&D HAX 4	weeks each De IWCP packages in B77 Package Skill ON CONTROL TECHNOLIGI hours per week Supplies and equipment Z REDUC TECH / RISK RED D&D Workers Instration Procurement Quantity Units BOE Type	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each K399S Buildina 776 Proiect KD10H 776 Complex Steelworkers 40 hours each per weeks Labor Labor Hours Labor Chours/Unit Total Total	Cost Risk Cost Materials/ S Cost Cost	Curve Linear Linear 4 week 4 Schedule Ri Sub Contingency & Escalation	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000 Dollars ks 5 Total Prime Burden Cost Cost Dollars Cost Cost Dollars Cost Cost	Total C
BOE Resources	A5H SUBCONTRACTED SRVS Factors 4 D&D Craft Support CH1103 - Perform Misc Modifications Estimators Experience - Randy Walke Experience Item Desc - Implement IV Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 320 hours, \$41k unburd Unit Cost Adjustment factor - None Revised Unit Cost - 320 hours, \$41 Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 2 RCTs A5C SUPPLIES Factors 1 A5H SUBCONTRACTED SRVS Factors 1 50 dollars per hour IDSTECH120 Description: B776/77	T060 D&D HAX 2 er on maintenance NCP Modification dened Ex unburdened T050 RADIATI 40 0000 NONE 2000 T060 D&D HAX 4 7 Technology Demo	weeks each De IWCP packages in B77 Package Skill ON CONTROL TECHNOLIGI hours per week supplies and equipment Z REDUC TECH / RISK RED D&D Workers Instration Procurement Quantity Units BOE	6/777 Department KD10H 776 Complex Steelworkers 4 weeks each K399S Building 776 Project KD10H 776 Complex Steelworkers 40 hours each per weeks Labor Labor Hours Labor C	Cost Risk Cost Materials/S	Curve Linear Linear 4 week 4 Schedule Ri Sub Contingency & Escalation 0 2.723	Ouantity Units 320.00 Hours 2.000.00 Dollars 32.000 Dollars ks 5 Total Prime Burden Cost Cost Dollars Cost Cost Dollars Cost Cost	

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Baseline Cost and Basis of Estimate Activity Filter Department Curve ZDEPT No Department Linear ZDEPT No Department Linear

Factors 1671.59 Dollars ESC ESCALATION Factors 1051.39 Dollars

CON CONTINGENCY

Line Item TECH1201 - Procure Technology Demonstration Vendor

Cost Element

BOE

WBS No:

Activity ID:

Resources

Estimators Experience - Randy Walker estimate based on prior quotes for sixe reduction and D&D toolong demonstrations.

Experience Item Desc - Procure Vendor for Technology Demonstration

0000 NONE

0000 NONE

Breakdown of Cost Data:

Item - 1 Units - Lot

1DAF03

1DSTECH120

Unit Cost - \$50k Unit Cost Adjustment factor None Revised Unit Cost - \$50k Basis for adjustment - N/A

Res

esources	Cost Element	Skill	Department	Curve	Quantity Units
	A5C SUPPLIES	0000 NONE	K399S Building 776 Project	Linear	50.000.00 Dollars

Rocky Flats Closure Project

Factors 50000 Technology Demonstration Vendor

Activity ID: 1DSTECH130 Description: B776/777 Technology Demonstration BIO Update 4 Schedule Risk

Baseline Devl

1DAF

Proiect

WBS Filter

Starts In FY

1.671.59 Dollars

1.051.39 Dollars

Monthly ID. IDO	Description. Direction Description.											
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SYS	Contingency And Escalation			1.00 ea EE 0				0	790	790	0	790
TECH1301	BIO Revisions	1.00	each	EE	0	0	0	14.500	0	14.500	0	14.500
	Tot	Total for Activity 1DSTECH130:				0	0	14.500	790	15.290	0	15.290

Line Item SYS - Contingency And Escalation

BOE

Resources

es		Cost Element		Skill		Department	Curve	<i>Ouantity</i>	Units
	CON	CONTINGENCY	0000	NONE	ZDEPT	No Department	Linear	484.76	Dollars
	Factors	484.760 Dollars							
	ESC	ESCALATION	0000	NONE	ZDEPT	No Department	Linear	304.90	Dollars

Factors 304.903 Dollars

Line Item TECH1301 - BIO Revisions

BOE

Estimators Experience - Randy Walker on maintenance IWCP packages in B776/777

Experience Item Desc - BIO Page Change for Technology demonstration

Breakdown of Cost Data:

Item - 1 Units - Lot

Unit Cost - \$15k unburdened

Unit Cost Adjustment factor - none Revised Unit Cost - \$15k unburdened

Basis for adjustment - N/A

Resources

es	Cost Element	Skill	Department	Curve	Ouantity Units
	A52 TENERA	E080 NUCLEAR (CRITICALITY) ENGINEE	R K399S Building 776 Project	Linear	8.500.00 Dollars
	Factors 1 BIO Engineer	85 dollars per hour	100 hours		
	Δ52 TENERΔ	P160 TECHNICAL WRITERS AND EDITOR	R K399S Building 776 Project	Linear	6 000 00 Dollars

Factors 1 Procedure Writer 80 hours 75 dollars per hour

Activity ID: 1DSTECH140 Description: B776/777 Technology Demo Procedure Development									Cost Risk 4 Schedule Risk 5					
Line Item	Description	Quantity	Units	BOE	Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost		
				Type	Hours/Unit	Total	Total	Cost	& Escalation	Cost				
SYS	Contingency And Escalation	1.00	ea	EE	0	0	0	0	2.562	2.562	0	2.562		
TECH1401	Identify Work Steps	1.00	each	EE	120	120	2.467	0	0	2.467	1.177	3.643		
TECH1402	Hazards Identification/JHA	1.00	each	EE	120	120	2.467	14.960	0	17.427	1.177	18.603		
TECH1403	Draft Operations Procedure	1.00	each	EE	0	0	0	5.200	0	5.200	0	5.200		

WBS No:	1DAF03 Rocky Flats						Closure Project Project Baseline Devl									
Activity ID:	1DSTECH140	Resoline Cost and Basis of Estimate WBS Filter 1DAF														
TEOLIA 405	D : O : D .			4.00	FF					Activity Filte				ts In FY	*	5.000
TECH1405	Revise Operation Procedure			1.00 each 1.00 each	EE		0	0		0	5.200	0	5.200		0	5.200
TECH1406 TECH1408	Prepare SES/USQD	Finalize Procedures			FF		0	0		0	6.800 7.605	0	6.800 7.605		0	6.800 7.605
HECH1400	Filialize Flocedules		To	1.00 each tal for Activity 1DSTE			0	240	10		39.765	2.562	47.261	2	.353	49.614
l ine Item SVS	S - Contingency And Escalation		10	Ital IOI ACIIVILY IDSTE	СП 140.		L	240	4.3	934	39.765	2.302	47.201		.333	49.014
BOE	3 - Contingency And Escalation															
	0.00			CI III										. 1	** .	
Resources		0000	NONE	Skill		ZDEDT	N- D	Departn	ment			Curve		ntity	Units	
	CON CONTINGENCY	1 0000	NONE			ZDEPT	No Depa	tment				Linear	1	.573.03	Dollars	
	Factors 1573.03 Dollars ESC ESCALATION	0000	NONE			ZDEDT	No Depa	-t				Linear		989.40	Dellere	
	Factors 989.397 Dollars	1 0000	INCINE			ZUEFI	NO Depa	unent				Lilleal		909.40	Dollais	
l ine Item TEC	CH1401 - Identify Work Steps															
BOE	Estimators Experience - Randy Walker	r based	on sim	ilar procedure d	levelopm	ent in	3776/77	7								
BUE	Experience Item Desc - Activity scre					.0110 111 .	3,,0,,,									
	Breakdown of Cost Data:															
	Item - 1															
	Units - Lot Unit Cost - 120 hrs, \$2k unburdened	4														
	Unit Cost Adjustment factor - None															
	Revised Unit Cost - 120 hrs, \$2k ur	nburdene	ed													
	Basis for adjustment - N/A															
Resources	Cost Element			Skill				Departn	ment			Curve	Que	ntity	Units	
	750 STRAIGHT TIME BASE	T050	RADIAT	ION CONTROL TECH	HNOLIGI	KD10H	776 Com					Linear			Hours	
	Factors 1 RCT		8	hours per day			5	davs								
	750 STRAIGHT TIME BASE	T060		Z REDUC TECH / RIS	SK RED	KD10H	776 Com	plex Steel	lworkers			Linear		80.00	Hours	
	Factors 2 D&D Workers		8	hours each per day	V		5	days								
Line Item TEC	CH1402 - Hazards Identification/JHA															
BOE	Estimators Experience - Randy Walker			ilar procedure d	levelopm	ent in	3776/77	7								
	Experience Item Desc - Job Hazard Ar Breakdown of Cost Data:	nalysis														
	Item - 1 Units - Lot															
	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene															
	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None															
	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u		ned													
	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None		ned													
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A	unburder		Skill				Departn				Curve	Оиа	ntity	Units	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE	unburder	RADIAT	ION CONTROL TECH	HNOLIGI	KD10H		plex Steel				Curve Linear	Оиа	ntity 40.00		
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT	inburder	RADIAT	ION CONTROL TECH		T	5	olex Steel davs	lworkers			Linear	Оиа	40.00	Hours	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE	unburder	RADIAT 8 D&D HA	ION CONTROL TECH hours per dav Z REDUC TECH / RIS	SK RED	T	5 776 Com	olex Steel davs olex Steel	lworkers lworkers				Оша		Hours	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers	T050	RADIAT 8 D&D HA 8	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each	SK RED	KD10H	5 776 Com 5	olex Steel davs olex Steel working o	lworkers lworkers davs			Linear Linear		40.00 80.00	Hours Hours	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA	T050	RADIAT 8 D&D HA 8	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN	SK RED h IGINEER	KD10H	5 776 Com 5 Buildina	olex Steel davs olex Steel working o	lworkers lworkers davs			Linear Linear Linear	8	40.00	Hours Hours	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour	T050 T060 E080	RADIAT 8 D&D HA 8 NUCLEA	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN Criticality Safety Er	SK RED h IGINEER naineers	KD10H K399S	5 776 Com 5 Buildina 12	olex Steel davs olex Steel working o 776 Proied davs eac	lworkers lworkers davs ct ch CSOL d	evelopment	8	Linear Linear Linear hours p	er day	40.00 80.00	Hours Hours Dollars	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA	T050 T060 E080	RADIAT 8 D&D HA 8 NUCLEA 1 NUCLEA	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN Criticality Safety En AR (CRITICALITY) EN	SK RED h IGINEER naineers	KD10H K399S	5 776 Com 5 Buildina 12 Buildina	olex Steel davs olex Steel working o 776 Proied davs eac 776 Proied	lworkers lworkers davs ct ch CSOL d	evelopment		Linear Linear Linear hours p	er dav	40.00 80.00 .160.00	Hours Hours Dollars Dollars	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA Factors 1 Nuclear Safety Engineer	T050 T060 E080	RADIAT 8 D&D HA 8 NUCLEA 1 NUCLEA	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week	SK RED h IGINEER naineers	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85	olex Steel davs olex Steel working o 776 Proied davs eac 776 Proied dollars of	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	8	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Resources	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA Factors 1 Nuclear Safety Engineer A52 TENERA	T050 T060 E080	RADIAT 8 D&D HA 8 NUCLE 1 NUCLE 40 INDUST	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week RIAL HYGIENISTS	SK RED h IGINEER naineers	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina	olex Steel davs plex Steel working of 76 Project davs eac 76 Project dollars pe 776 Project	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Dollars	
	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k unburdene Revised Unit Cost	T050 T060 E080	RADIAT 8 D&D HA 8 NUCLEA 1 NUCLEA	ION CONTROL TECH hours per dav Z REDUC TECH / RIS hours per dav each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week	SK RED h IGINEER naineers	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85	olex Steel davs olex Steel working o 776 Proied davs eac 776 Proied dollars of	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment		Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Line Item TEC	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k unburdene Rectors	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8	TON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
	Item - 1 Units - Lot Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A Cost Element 750 STRAIGHT TIME BASE Factors 1 RCT 750 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA Factors 1 Nuclear Safetv Engineer A52 TENERA Factors 1 Industrial Hygenist CH1403 - Draft Operations Procedure Estimators Experience - Randy Walker	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8 on sim	HON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week 'RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Line Item TEC	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k unburdene Rectors	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8 on sim	HON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week 'RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Line Item TEC	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k unburdene Revised Unit Cost Element T50 STRAIGHT TIME BASE Factors 1 RCT T50 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA Factors 1 Nuclear Safety Engineer A52 TENERA Factors 1 Industrial Hygenist CH1403 - Draft Operations Procedure Estimators Experience - Randy Walker Experience Item Desc - Draft operations Breakdown of Cost Data: Item - 1	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8 on sim	HON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week 'RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Line Item TEC	Item - 1 Units - Lot Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k u Basis for adjustment - N/A **Cost Element** 750 STRAIGHT TIME BASE **Factors** 1 RCT 750 STRAIGHT TIME BASE **Factors** 2 D&D Workers A52 TENERA **Factors** 3 dollars per hour A52 TENERA **Factors** 1 Nuclear Safety Engineer A52 TENERA **Factors** 1 Industrial Hygenist CH1403 - Draft Operations Procedure Estimators Experience - Randy Walker Experience Item Desc - Draft operations Breakdown of Cost Data: Item - 1 Units - Lot	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8 on sim	HON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week 'RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	
Line Item TEC	Item - 1 Units - Lot Unit Cost - 120 hrs, \$17k unburdene Unit Cost Adjustment factor - None Revised Unit Cost - 120 hrs, \$17k unburdene Revised Unit Cost Element T50 STRAIGHT TIME BASE Factors 1 RCT T50 STRAIGHT TIME BASE Factors 2 D&D Workers A52 TENERA Factors 85 dollars per hour A52 TENERA Factors 1 Nuclear Safety Engineer A52 TENERA Factors 1 Industrial Hygenist CH1403 - Draft Operations Procedure Estimators Experience - Randy Walker Experience Item Desc - Draft operations Breakdown of Cost Data: Item - 1	T050 T060 E080 E080 P090	RADIAT 8 D&D HA 8 NUCLE/ 1 NUCLE/ 40 INDUST 8 on sim	HON CONTROL TECH hours per day AZ REDUC TECH / RIS hours per day each AR (CRITICALITY) EN Criticality Safety Er AR (CRITICALITY) EN hours per week 'RIAL HYGIENISTS hours per day	SK RED h NGINEER naineers NGINEER	KD10H K399S K399S	5 776 Com 5 Buildina 12 Buildina 85 Buildina 85	olex Steel davs plex Steel working o 76 Project davs eac 76 Project dollars pe	lworkers lworkers davs ct ch CSOL d ct er hour	evelopment	1	Linear Linear Linear hours p Linear week re	er dav 3eview nuclear	40.00 80.00 .160.00 .400.00 hazard	Hours Hours Dollars Controls	

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Rocky Flats Closure Project Activity ID: 1DSTECH140 WBS Filter 1DAF **Baseline Cost and Basis of Estimate** Activity Filter Revised Unit Cost - \$5k unburdened Basis for adjustment - N/A Resources Cost Element Skill Department Curve P160 TECHNICAL WRITERS AND EDITOR K399S Building 776 Project A52 TENERA Linear dollars per hour hours per week 2 weeks Factors 1 procedure writer

Line Item TECH1405 - Revise Operation Procedure

1DAF03

WBS No:

BOE

Estimators Experience - Randy Walker based on similar procedure development in B776/777

Experience Item Desc - First revision and comment incorporation

Breakdown of Cost Data: Item - 1

Units - Lot Unit Cost - \$5k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$5k unburdened Basis for adjustment - N/A

Resources Cost Element

Department Curve A52 TENERA P160 TECHNICAL WRITERS AND EDITOR | K399S | Building 776 Project Linear 5.200.00 Dollars

Factors 65 dollars per hour weeks Procedure Writer 40 hours per week

Line Item TECH1406 - Prepare SES/USQD

Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE

Experience Item Desc - Prepare safety screen and USQ determination

Breakdown of Cost Data:

Item - 1 Units - Lot

Unit Cost - 378 hrs, \$7k unburdened Unit Cost Adjustment factor - None

Revised Unit Cost - 378 hrs, \$7k unburdened

Basis for adjustment - N/A

Resources Cost Element Units Department E080 NUCLEAR (CRITICALITY) ENGINEER K399S Building 776 Project A52 TENERA 6.800.00 Dollars Linear

Factors 1 Nuclear Engineer 40 hours per week 85 dollars per hour

2 weeks

Line Item TECH1408 - Finalize Procedures

BOE

Estimators Experience - Randy Walker based on similar procedure development in B776/777

Experience Item Desc - Incorporate final comments into the procedure

Breakdown of Cost Data:

Item - 1 Units - Lot

Unit Cost - \$8k unburdened

Unit Cost Adjustment factor - None

Revised Unit Cost - \$8k unburdened

Basis for adjustment - N/A

Resources

Cost Element Department A52 TENERA P160 TECHNICAL WRITERS AND EDITOR K399S Building 776 Project Linear 7.605.00 Dollars

9 hours per day 65 dollars per hour Procedure Writer 13 working days Factors

Activity ID: 1DSTECH150 Description: B776/777 Technology Demonstration Training Cost Risk 4 Schedule Risk

Line Item	Description	Quantity	Units BOI	E Labor	Labor Hours	Labor Cost	Materials/ Sub	Contingency	Total Prime	Burden Cost	Total Cost
			Typ	e Hours/Unit	Total	Total	Cost	& Escalation	Cost		
SYS	Contingency And Escalation	1.00 e	ea EE	0	0	0	0	653	653	0	653
TECH1501	Training for Technology Demo Implementation	1.00 e	each EE	120	120	2.965	0	0	2.965	1.414	4.380
TECH1502	Develop Certification Requirements	1.00 e	each EE	0	0	0	7.605	0	7.605	0	7.605
	To	tal for Activity	/ 1DSTECH150:		120	2.965	7.605	653	11.223	1.414	12.637

Line Item SYS - Contingency And Escalation

BOE

Skill Cost Element Resources Department Curve Units

Proiect

Baseline Devl

Starts In FY

Ouantity

Units

5.200.00 Dollars

WBS No: 1DAF03 Baseline Devl Proiect Rocky Flats Closure Project 1DAF Activity ID: 1DSTECH150 WBS Filter **Baseline Cost and Basis of Estimate** Activity Filter Starts In FY CON CONTINGENCY 0000 NONE ZDEPT No Department 400.67 Dollars Linear Factors 400.666 Dollars ZDEPT No Department ESC ESCALATION 0000 NONE 252.01 Dollars Linear Factors 252.009 Dollars Line Item TECH1501 - Training for Technology Demo Implementation Estimators Experience - Randy Walker based on experience from training to procedures in B776/777 BOE Experience Item Desc - Training for Technology Demonstration Operation Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - 120 hours, \$3k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - 120 hours, \$3k unburdened Basis for adjustment -Cost Element Skill **Ouantity** Units Resources Department Curve 750 STRAIGHT TIME BASE T060 D&D HAZ REDUC TECH / RISK RED | KD10H | 776 Complex Steelworkers Linear 80.00 Hours Factors 2 Craft Personnel hours each to train on operation of 1 751 OVERTIME BASE & PRE T050 RADIATION CONTROL TECHNOLIGI | KD10H | 776 Complex Steelworkers 40.00 Hours Linear hours each to train on the operation 1 Factors 1 **RCTs** week Line Item TECH1502 - Develop Certification Requirements Estimators Experience - Randy Walker based on similar procedure development in B776/777 BOE Experience Item Desc - Develop Certification Requirements for Training operators in the techniques and tools demonstrated Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$8k unburdened Unit Cost Adjustment factor - None Revised Unit Cost - \$8k unburdened Basis for adjustment - N/A Resources Cost Element Skill Department Curve **Ouantity** Units A52 TENERA P150 TRAINERS K399S Building 776 Project 7.605.00 Dollars Linear Factors 1 Trainer 13 working days hours per day 65 dollars per hour Activity ID: 1DSTECH160 Description: B776/777 Technology Demonstration Readiness Demo 4 Schedule Risk Cost Risk 5 Materials/ Sub Contingency Total Prime Line Item Description **Ouantity** Units BOELabor Labor Hours Labor Cost Burden Cost Total Cost Hours/Unit & Escalation TypeTotal Total Cost Cost SYS Contingency And Escalation 1.00 ea EE 0 0 0 0 1.470 1,470 0 1,470 Readiness Demonstration Preparation TECH1601 1.00 each EE 0 0 0 7,000 0 7,000 0 7,000 Perform Readiness Demonstration 1.00 each EE 0 0 0 0 20,000 0 20,000 TECH1602 20,000 Total for Activity 1DSTECH160: 0 0 1,470 28,470 0 27,000 28,470 Line Item SYS - Contingency And Escalation BOE Resources Cost Element Skill Department Curve Units ZDEPT No Department CON CONTINGENCY 0000 NONE Linear 902.66 Dollars Factors 902.657 Dollars 0000 NONE ESC ESCALATION ZDEPT No Department Linear 567.75 Dollars 567.75 Dollars Factors Line Item TECH1601 - Readiness Demonstration Preparation Estimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777 BOE Experience Item Desc - Perform Readiness Demonstration preparation activities for the Technology Demonstration Breakdown of Cost Data: Item - 1 Units - Lot Unit Cost - \$7k unburdened Unit Cost Adjustment factor - none

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WBS No: 1DAF03 Rocky Flats Closure Proiect Proiect Baseline Devl
Activity ID: 1DSTECH160 Receiving Cost and Resis of Estimate WBS Filter 1DAF

Baseline Cost and Basis of Estimate

WBS Filter 1DAF

Activity Filter *

Starts In FY

Curve

Revised Unit Cost - \$7k unburdened Basis for adjustment - N/A

 Resources
 Cost Element
 Skill
 Department
 Curve
 Quantity
 Units

 A5H
 SUBCONTRACTED SRVS
 G010
 ADMINISTRATIVE ASSISTANTS
 K399S
 Building 776 Project
 Linear
 7,000,001 Dollars

Factors 40 hours to conduct management review 1 Administrative Assistant 35 dollars per hour 5 weeks

Line Item TECH1602 - Perform Readiness Demonstration

Estimators Experience - Randy Walker based on similar Readiness demonstrations in B776/777

Experience Item Desc - Perform Readiness Demonstration for Technology Demo

Breakdown of Cost Data:

Item - 1

BOE

Units - Lot

Unit Cost - \$20k unburdened Unit Cost Adjustment factor - none Revised Unit Cost - \$20k unburdened

Basis for adjustment - N/A

Resources Cost Element Skill Department

A5H SUBCONTRACTED SRVS E130 OTHER ENGINEERS K399S Building 776 Project Linear 20.000.00 Dollars

Factors 5 subcontracted evaluators 1 week each 40 hours per week 100 dollars per hour

Report Totals: Labor Hours Labor Cost Materials/Sub Contingency Total Prime Burden Cost Total Cost Total Total Cost & Escalation Cost 162.961 3.912.708 5.647.004 1.383.816 10.943.528 1.412.162 12.355.691

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